

# Documentation for the 2007–08 Schools and Staffing Survey

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# Documentation for the 2007–08 Schools and Staffing Survey

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## Chapter 1. Overview

The Schools and Staffing Survey (SASS) is conducted by the National Center for Education Statistics (NCES) on behalf of the U.S. Department of Education in order to collect extensive data on American public and private elementary and secondary schools. SASS provides data on the characteristics and qualifications of teachers and principals, teacher hiring practices, professional development, class size, and other conditions in schools across the nation.

SASS is a large-scale sample survey of K–12 school districts, schools, teachers, library media centers, and administrators in the United States. It includes data from public, public charter, private, and Bureau of Indian Education (BIE)-funded school sectors. Therefore, SASS provides a multitude of opportunities for analysis and reporting on elementary and secondary educational issues.

### Background

In the early 1980s, education policymakers became increasingly aware of the need for studies that would provide national data on public and private schools, their programs, teachers, and staffing levels. Such data would inform policymakers about the status of teaching and education, identify the areas that most need improvement, and clarify conflicting reports on issues related to policy initiatives, such as teacher shortages.

The first attempt to address these concerns was a series of surveys that began in 1983 and included five surveys:

- The *Survey of Teacher Demand and Shortage* was conducted in 1983–84 among public and private schools and included questions on teacher demand and incentive plans for teachers.
- The *Public School Survey—School Questionnaire* was conducted in 1984–85 to provide descriptive information about public schools (e.g., enrollment and number of teachers), as well as data on use of teacher incentive plans, volunteers, and computers.
- The *National Survey of Private Schools—School Questionnaire* was conducted in 1985–86 to provide parallel information about private schools.
- The *Public School Survey—Teacher Questionnaire* was conducted in 1984–85 to provide information about teacher characteristics, qualifications, incentives, and opinions concerning policy issues.
- The *National Survey of Private Schools—Teacher Questionnaire* was conducted in 1985–86 to provide parallel information about private school teachers.

Due to methodology and substance problems within these surveys and the increasing demands for more and better education data, NCES initiated a redesign of its elementary/secondary education surveys in 1985. This redesign began with an evaluation of the then-current data system; opinions and advice were solicited from the education policy and research community on matters of context, methodology, and analytic utility. In late 1985, NCES reported the findings of this evaluation under the heading of *Excellence in Schools Surveys and Analysis Study*, which has become a continuing series and was renamed the *Schools and Staffing Survey*.

The expansion of the earlier surveys into the set of concurrent and integrated surveys called the *Schools and Staffing Survey* (SASS) was in response to concern expressed in the evaluation about the scarcity of information on schooling. These expansions were also responses to conflicting reports of teacher shortages and increasing public concern about the status of teaching and schools in general. Under a contract with NCES, the Rand Corporation redesigned the elementary/secondary education surveys to

collect information relevant to their expanded purposes and to correct the methodological difficulties affecting the surveys. SASS was designed to provide a national snapshot of America's public and private schools. The first administration of these surveys was in the 1987–88 school year. In order to achieve high response rates and to maintain consistency in procedures across types of SASS questionnaires, NCES selected the U.S. Census Bureau to collect and process the data for all parts of the survey.

After the 1987–88 administration of SASS, the survey was conducted again in 1990–91, 1993–94, 1999–2000, and 2003–04. During the 6-year hiatus between the 1993–94 and 1999–2000 administrations, NCES examined the purpose, direction, and use of the survey. Toward this purpose NCES commissioned 12 papers from experts to recommend how to improve and expand the scope and utility of SASS. These papers are compiled in *The Schools and Staffing Survey: Recommendations for the Future* (NCES 97–596) by John E. Mullens and Daniel Kaspzyk. Many of the recommendations in this report were considered for inclusion in SASS, but only some of them were implemented. Factors—such as the burden on the respondent, the need to test new items, how well the recommendations fit into the overall vision for SASS, and cost constraints—had to be balanced in the SASS survey redesign.

As a result of this redesign, the 1999–2000 SASS implemented a new set of questionnaires. The questionnaires for public charter schools were designed to collect some of the same data as the 4-year longitudinal design survey titled “National Study of Charter Schools,” funded by the Office of Educational Research and Improvement (renamed the Institute of Education Sciences in 2002). By including public charter schools in SASS, public charter school data could be directly compared to “traditional” public school data for the first time. The availability of a complete universe, or sampling frame, for public charter schools made this development feasible in 1999–2000. The redesign also led to the discontinuation of the student records questionnaire. Although the experimental inclusion of this questionnaire in the 1993–94 SASS provided interesting data, both the sampling methods and the ability to gain the respondent’s cooperation in obtaining administrative records on student dropout and behavior proved to be too difficult for continuation in 1999–2000 and beyond.

Beginning with the 2003–04 SASS, a sample of public charter schools was implemented because the public charter school frame used for the 1999–2000 SASS was out-of-date and the 2001–02 Common Core of Data (CCD) frame for charter schools was considered to be incomplete. Moreover, funding to continue administering a separate questionnaire for public charter schools was not available.

The 2007–08 SASS provides valuable data for educators, researchers, and policymakers on public school districts (Local Education Agencies); public (including public charter), private, and BIE-funded schools, principals, and teachers; and public and BIE-funded school library media centers. Public charter school data are included with traditional public school data in the 2007–08 SASS. The 2007–08 SASS collected data from public charter and BIE-funded schools in the School Questionnaire or Public School Questionnaire (With District Items), as well as in the Principal and Teacher Questionnaires. Chapter 2 includes details on the changes to questionnaires since the 2003–04 SASS.

## **Purpose and Content of the Survey**

The overall objective of SASS is to collect the information necessary for a comprehensive picture of elementary and secondary education in the United States. The abundance of data collected permits detailed analyses of the characteristics of schools, principals, teachers, school libraries, and public school district policies. The linkage of the SASS questionnaires enables researchers to examine the relationships among these elements of education.

The 2007–08 SASS consisted of five types of questionnaires: a School District Questionnaire, Principal Questionnaires, School Questionnaires, Teacher Questionnaires, and a School Library Media Center Questionnaire. The Principal, School, and Teacher Questionnaires were modified slightly between the public school versions (Principal Questionnaire, School Questionnaire, and Teacher Questionnaire) and private school versions (Private School Principal Questionnaire, Private School Questionnaire, and Private School Teacher Questionnaire) to refer to either the public or private sector correctly. The Private School Questionnaire also incorporated the Private School Universe Survey (PSS) items that were collected at the same time as SASS in 2007–08.<sup>1</sup> The School Library Media Center Questionnaire was administered to public (including public charter) and BIE-funded schools in 2007–08.

## School District Questionnaire (Form SASS-1A)

The purpose of the 2007–08 School District Questionnaire was to obtain information about school districts, such as student enrollment, staffing, teacher recruitment and hiring practices, teacher dismissals, salary schedules, school choice, magnet programs, and graduation requirements. The applicable sections (e.g., comparable sections on hiring, etc.) for private schools were added to the Private School Questionnaire. Public charter schools, BIE-funded schools, and schools that are the only school in the district were given the Public School Questionnaire (With District Items) rather than the School District Questionnaire. The Public School Questionnaire (With District Items) includes all of the items included on the School Questionnaire in addition to selected items from the School District Questionnaire.

The 2007–08 School District Questionnaire had these seven sections:

- *Section I—General Information About This District* obtained information on grades offered, enrollment, counts of students by race, participation in the National School Lunch Program, the number of days in the school year, full-time equivalent (FTE) counts of all teachers employed by the school district, counts of teachers by race/ethnicity, existence of a teacher/principal union, and number of principals in the district.
- *Section II—Recruitment and Hiring of Staff* collected information on recruitment incentives, newly hired teachers and principals, training or development for aspiring school administrators, and dismissal of teachers from the previous school year.
- *Section III—Principal and Teacher Compensation* collected data on salary schedules, benefits, and pay incentives.
- *Section IV—Student Assignment* obtained information about the availability of choice and magnet programs in the district and the existence of homeschooled students.
- *Section V—Graduation Requirements* collected data on high school graduation instructional requirements, community service requirements, and other assessments necessary for graduation.
- *Section VI—District Performance* collected data on Adequate Yearly Progress.
- *Section VII—Migrant Education* obtained information about the enrollment of migrant students and the services provided for them.

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<sup>1</sup> The 2007–08 school year was a survey year for both SASS and the Private School Universe Survey (PSS). PSS is administered by NCES every 2 years to all private K–12 schools in the United States. The SASS Private School Questionnaire includes all of the PSS questions so that private schools selected for SASS would not be asked to complete two separate questionnaires.

## Principal and Private School Principal Questionnaires (Forms SASS-2A and -2B)

The purpose of the 2007–08 Principal Questionnaires was to obtain information about principal/school head demographic characteristics, training, experience, salary, and judgments about the seriousness of school problems. The questionnaire appeared in two versions that contained minor variations in phrasing to reflect differences between public and private schools in governing bodies and position titles in the schools.

The 2007–08 Principal Questionnaire and Private School Principal Questionnaire had these eight sections:

- *Section I—Principal or School Head Experience and Training* obtained information about principal work experience, previous positions held, education level, and professional development.
- *Section II—Goals and Decision Making* obtained attitudinal information about educational goals and school governance.
- *Section III—Teacher and Aide Professional Development* collected information on professional development opportunities and activities for teachers and instructional aides.
- *Section IV—School Climate and Safety* obtained information on expulsions and suspensions, security practices, health and safety issues at the school, parent or guardian participation in school events, and school resources to encourage parental involvement.
- *Section V—Instructional Time* collected information about the approximate amount of time that third and/or eighth grade students spent in core academic subjects, and the approximate amount of time that third grade students spent in select nonacademic subjects during the most recent full week of school.
- *Section VI—Teacher and School Performance* collected information about teacher performance, barriers to dismissal of poor-performing teachers, and Adequate Yearly Progress.
- *Section VII—Working Conditions and Principal or School Head Perceptions* collected information on time spent on school-related activities and interacting with students, contractual number of working days, and job satisfaction.
- *Section VIII—Demographic Information* obtained information about the principal's gender, race/ethnicity, age, and salary.

## School Questionnaire (Form SASS-3A)

The purpose of the 2007–08 School Questionnaire was to obtain information about traditional public schools, such as grades offered, number of students enrolled, staffing patterns, teaching vacancies, high school graduation rates, programs and services offered, and college application rates.

The 2007–08 School Questionnaire for public schools had these six sections:

- *Section I—General Information About This School* obtained information about grade range, migrant students, length of the school day and school year, race/ethnicity of students, school type, attendance, enrollment, and websites.
- *Section II—Admissions and Programs* collected information on requirements for admission and school programs offered.
- *Section III—Students and Class Organization* collected information about class and calendar organization, career preparation, and graduation rates.

- *Section IV—Staffing* obtained information about the number of full- and part-time staff, race/ethnicity of teachers, specialist and coaching assignments, substitute teachers, level of difficulty involved in filling teacher vacancies, and newly hired teachers.
- *Section V—Special Programs, Services, and Performance* obtained information about students with Individual Education Plans, services for limited-English-proficient students and parents, the National School Lunch Program, and Title I services.
- *Section VI—Charter School Information* collected information from public charter schools on the creation of the charter school and support offered to homeschooled students.

## Private School Questionnaire (Form SASS-3B)

The purpose of the 2007–08 Private School Questionnaire was to obtain information about private schools, such as grades offered, number of students enrolled, school affiliations, staffing patterns, teaching vacancies, high school graduation rates, and programs and services offered. Private schools received the Private School Questionnaire, an expanded version of the School Questionnaire that included items from the School District Questionnaire (Form SASS-1A).

The 2007–08 Private School Questionnaire had these eight sections:

- *Section I—General Information and School Affiliation* obtained information about grade range, enrollment, race/ethnicity of students, attendance, length of the school day and school year, websites, school type, support offered to homeschooled students, religious orientation, and affiliation with religious organizations.
- *Section II—Tuition and Admissions* collected information on student boarding, tuition, students supported by a voucher program, and requirements for admission.
- *Section III—Students and Class Organization* collected information about class and calendar organization, career preparation, and programs offered.
- *Section IV—Graduation Requirements* collected data on high school graduation instructional requirements, community service requirements, and graduation rates.
- *Section V—Staffing* obtained information about the number of full- and part-time staff, race/ethnicity of teachers, specialist and coaching assignments, and substitute teachers.
- *Section VI—Special Programs and Services* obtained information about students with a formally identified disability, services for limited-English-proficient students and parents, the National School Lunch Program, and Title I services.
- *Section VII—Recruitment and Hiring of Teachers* collected information about teaching vacancies, level of difficulty involved in filling teacher vacancies, newly hired teachers, and dismissal of teachers from the previous school year.
- *Section VIII—Teacher Compensation* collected data on salary schedules, benefits, pay incentives, and the number of days in the normal contract year.

## Public School Questionnaire (With District Items) (Form SASS-3Y)

The purpose of the 2007–08 Public School Questionnaire (With District Items) was to obtain information about schools, such as grades offered, number of students enrolled, staffing patterns, teaching vacancies, high school graduation rates, and programs and services offered. Schools that are the only school in the district, state-run schools (e.g., schools for the blind), charter schools, and BIE-funded schools received the Public School Questionnaire (With District Items), an expanded version of the School Questionnaire that included items from the School District Questionnaire (Form SASS-1A).

The 2007–08 Public School Questionnaire (With District Items) had these nine sections:

- *Section I—General Information About This School* obtained information about grade range, enrollment, race/ethnicity of students, school type, attendance, length of the school day and school year, and websites.
- *Section II—Admissions and Programs* collected information on requirements for admission and school programs offered.
- *Section III—Students and Class Organization* collected information about class and calendar organization and career preparation.
- *Section IV—Graduation Requirements* collected data on high school graduation instructional requirements, community service requirements, other assessments necessary for graduation, and graduation rates.
- *Section V—Staffing* obtained information about the number of full- and part-time staff, race/ethnicity of teachers, specialist and coaching assignments, and substitute teachers.
- *Section VI—Recruitment and Hiring of Staff* collected information about teaching vacancies, level of difficulty involved in filling teacher vacancies, newly hired teachers, recruitment incentives, and dismissal of teachers from the previous school year.
- *Section VII—Teacher Compensation* collected data on salary schedules, benefits, pay incentives, and the number of days in the normal contract year.
- *Section VIII—Special Programs and Services* obtained information about students with Individual Education Plans, services for limited-English-proficient students and parents, the National School Lunch Program, and Title I services.
- *Section IX—Charter Schools and Homeschooling* collected information from public charter schools on the creation of the charter school and support offered to homeschooled students.

### **Teacher and Private School Teacher Questionnaires (Forms SASS-4A and -4B)**

The purpose of the 2007–08 Teacher Questionnaires was to obtain information about teachers, such as education and training, teaching assignment, certification, workload, and perceptions and attitudes about teaching.

The 2007–08 Teacher Questionnaire and Private School Teacher Questionnaire had these nine sections:

- *Section I—General Information* obtained general information about teaching status, teaching experience, and other professional experiences.
- *Section II—Class Organization* obtained information about class enrollments, students with an Individualized Education Program, students of limited-English proficiency, organization of classes, subjects taught, and class size.
- *Section III—Educational Background* collected information on academic degrees, teacher assessments, and teacher preparation programs.
- *Section IV—Certification and Training* obtained information on types of teaching certification held by the teacher, content area, and grades covered by the certification. For new teachers, information was collected on attitudes toward their preparation for teaching, participation in an induction program, and mentoring.
- *Section V—Professional Development* collected information about professional development activities and their impact.
- *Section VI—Working Conditions* obtained information about hours worked, money spent on classroom supplies without reimbursement, and methods used to communicate with parents or students outside of the regular school day.

- *Section VII—School Climate and Teacher Attitudes* obtained attitudinal information on teacher influence on planning and teaching, collaboration between teachers, satisfaction with teaching, student problems, and school safety.
- *Section VIII—General Employment and Background Information* obtained information about teacher salary, supplemental income, union affiliation, gender, age, and race/ethnicity.
- *Section IX—Contact Information* requested that respondents provide personal contact information as well as contact information for two additional people who would be able to reach them in the event that they relocated before the mailing of the Teacher Follow-Up Survey. This information was necessary for the Teacher Follow-Up Survey that was administered the following year.

## School Library Media Center Questionnaire (Form LS-1A)

The purpose of the 2007–08 School Library Media Center Questionnaire was to obtain information about public school and BIE-funded library media centers and librarians, such as amount and experience of library staff, and the organization, expenditures, and collections of the library media center.

The 2007–08 School Library Media Center Questionnaire had these five sections:

- *Section I—2007–08 Facilities, Services, and Policies* obtained information about the capacity, scheduling, services, and policies of the library media center.
- *Section II—2007–08 Staffing* collected information about the number of professional, clerical, and volunteer staff in the library, and whether the professional staff members held master’s degrees and were certified as classroom teachers.
- *Section III—2007–08 Technology* obtained information about the different technology resources in the school, such as computers, online databases, DVD players, etc.
- *Section IV—2007–08 Information Literacy* inquired about information literacy standards and curriculum.
- *Section V—2006–07 Collections and Expenditures* collected information about the size of and expenditures for the library media collection.

## Target Populations, Estimates, and Respondent Status

### Target Populations

The target populations for the 2007–08 SASS are described below. For more information on sampling, see chapter 4.

- *School districts.* The target population included school districts that operated one or more schools, employed elementary and/or secondary level teachers, and were themselves in operation in the 2007–08 school year; for example, public school districts, state agencies that operated schools for special student populations (such as inmates of juvenile correctional facilities), domestic schools under the Department of Defense (DoD), and cooperative agencies that provided special services to more than one school district. Entities that authorized public charter schools were not included, unless they were also public school districts. All public charter schools or single school districts received the Public School Questionnaire (With District Items), since it was likely that one respondent could complete the items from both the School Questionnaire and the School District Questionnaire.
- *Schools.* The target population included public, public charter, private, and BIE-funded schools with students in any of grades 1–12 or in comparable ungraded levels and in operation in school year 2007–08.

- *Principals.* The target population included principals of the targeted school populations.
- *Teachers.* The target population included teachers in the targeted school populations who taught students in any of grades K–12 or in comparable ungraded levels in the 2007–08 school year.
- *School library media centers.* The target population included school library media centers, libraries, or resource centers in public, public charter, and BIE-funded schools that have such a facility. A school library was defined as an organized collection of printed, audiovisual, or computer resources which is administered as a unit, is located in a designated place or places, and makes resources and services available to students, teachers, and administrators.

The sampling frame for public schools was an adjusted version of the 2005–06 CCD. The sample of public schools was drawn from the sampling frame for the 2005–06 school year. CCD includes regular public schools, charter schools, DoD-operated domestic military base schools, and special purpose schools, such as special education, vocational, and alternative schools. NCES collects CCD data annually from all state education agencies. Schools outside of the United States and schools that teach only prekindergarten, kindergarten, or postsecondary students were deleted from the CCD frame prior to sampling for SASS. Public schools that closed in school year 2005–06 or were not yet opened were not included. School districts operating a sampled school were also selected. Prior to stratification and sampling, CCD schools were collapsed to match the SASS definition of a school. The purpose and operations of this collapsing activity are discussed in chapter 4.

The sampling frame for private schools is based on a dual frame approach, as described further in Chapter 4, since the list frame does not provide complete coverage. The list frame was based on the 2005–06 PSS, updated with private school organizations and state lists collected by the Census Bureau in the summer of 2006. An area frame was used to find schools missing from the list frame, thereby compensating for the incomplete coverage of the list frame. The area frame was also based on the 2005–06 PSS, but no updates were made.

The BIE frame consisted of a list of elementary, secondary, and combined K–12 schools that BIE operated or funded during the 2005–06 school year. The list was obtained from the CCD. All BIE-funded school records that met the SASS definition of a school were included in the SASS sample.

All library media centers in public, public charter, and BIE-funded schools in the SASS sample were asked to complete the School Library Media Center Questionnaire.

The sampling frame for the Teacher Questionnaires consisted of lists of teachers provided by schools in the SASS sample. Teachers were defined as any long-term staff who taught a regularly scheduled class to students in grades K–12 or comparable ungraded levels. The Teacher Listing Form (TLF) was collected by Census Bureau staff as early as possible in the 2007–08 school year at all public, private, BIE-funded, and public charter schools in the SASS sample to obtain a complete list of all the teachers employed at each school. The form included space for schools to indicate the following: the teacher’s assignment (subject matter and/or grade level), whether the teacher was full- or part-time, the level of experience, and whether the teacher was likely to be teaching at this school next year. The sample of teachers was selected from all of the schools that provided teacher lists.

## Estimates

SASS was designed to produce national, regional, and state estimates for public elementary and secondary schools and related components (e.g., schools, teachers, principals, school districts, and school library media centers); national estimates for BIE-funded and public charter schools and related components (e.g., schools, teachers, principals, and school library media centers); and national, regional, and affiliation strata estimates for the private school sector (e.g., schools, teachers, and principals). The affiliation strata for private schools were

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Baptist;
- Jewish;
- Lutheran;
- Seventh-day Adventist;
- Other religious;
- Nonsectarian—regular;
- Nonsectarian—special emphasis; and
- Nonsectarian—special education.

Comparisons between public and private schools are possible only at the regional and national levels, because private schools were selected for sampling by affiliation strata and region rather than by state.

The teacher survey was designed to support comparisons between new and experienced teachers (3 years or less of experience vs. more than 3 years of experience) at the state level for public school teachers, and at the regional or affiliation strata level for private school teachers. Comparisons between teachers by race/ethnicity and by full-time or part-time status are possible at the national level. The school library media center survey was designed to produce estimates at the state level for public schools.

## Respondent Status

The numbers of respondents that were sampled, determined to be in-scope for SASS, and completed the interview are presented in the table below. These data are based on how respondents are organized into data files, rather than on which questionnaire respondents received. (For details on which questionnaires were used to produce each data file, see chapter 11.) Sampled respondents are those who were selected for participation in SASS for each respondent type. Sampled respondents were classified as in-scope if they were deemed eligible for SASS during the screening operation or data collection period. Interviews are in-scope respondents that completed their questionnaire. Cases were classified as having completed the questionnaire if specific items as well as a specific percentage of items had responses; these criteria differ by questionnaire. For details on sampling, see chapter 4. For details on in-scope and out-of-scope cases and on determining how many sampled respondents completed interviews (i.e., final interview status), see chapter 7.

It should be noted that the number of sampled public and private school teachers reported in table 1 differs from that reported in the 2007–08 SASS First Look reports. About 160 public school teachers and 50 private school teachers were sampled from schools that were later determined to be out of scope for SASS. These out-of-scope teachers are included in table 1.

**Table 1. Number of school districts, schools, principals, teachers, and school library media centers, by sector and interview status: 2007–08**

Respondent and interview status	Total	Public school sector	Private school sector	BIE-funded school sector
School district				
Sampled	5,248	5,248	†	†
In-scope	5,134	5,134	†	†
Interviews	4,601	4,601	†	†
School				
Sampled	12,910	9,795	2,937	178
In-scope	12,221	9,405	2,646	170
Interviews	9,671	7,572	1,968	131
Principal				
Sampled	12,910	9,795	2,937	178
In-scope	12,178	9,383	2,627	168
Interviews	9,483	7,459	1,891	133
Teacher				
Sampled	56,584	47,603	8,231	750
In-scope	54,010	45,553	7,768	689
Interviews	44,795	38,240	5,999	556
School library media center				
Sampled	9,973	9,795	†	178
In-scope	8,996	8,840	†	156
Interviews	7,399	7,276	†	123

† Not applicable.

NOTE: Cases that met sampling requirements are included in the “sampled” category. Of those cases, “in-scope” refers to the sampled cases that met SASS eligibility requirements (i.e., interviews as well as non-interviews). “Interviews” consist of eligible (in-scope) cases for which data were collected. BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

## Periodicity of the Survey

Periodicity is based on the balance between the need for more up-to-date data with the realities of mounting data collection costs and of the time needed to complete a data collection and processing cycle. A 3-year cycle was maintained for the first three data collections but proved to be too frequent to incorporate the analysis of the previous SASS in the next one. Six years separated the 1999–2000 SASS from the previous one, due to a major redesign of the survey. Following this SASS redesign, it was determined that 4 years provided the best balance between data needs and operational needs. The 1999–2000, 2003–04, and the 2007–08 SASS were conducted on 4-year intervals, and this cycle length will be repeated for the upcoming SASS administrations.

## Contents

This report contains chapters on changes in SASS design, content, and methodology from 2003–04, preparation for the 2007–08 SASS, sample design and implementation, data collection, response rates, data processing, imputation procedures, weighting and variance estimation, a review of the quality of SASS data, SASS data files and merging information, and user notes and cautions.

Information in the chapters is supported by material in the following appendixes:

- A. Key Terms for SASS;
- B. Questionnaire Availability;
- C. Summary of the 2005–06 SASS Methodological Pretest Findings and Recommendations for the 2007–08 SASS;
- D. Analysis of Changes to the 2005–06 SASS Pretest Teacher Listing Form and TFS-1(X) and Recommendations for the 2007–08 SASS and 2008–09 TFS;
- E. Quality of Address Corrections From FirstData for Schools in the 2005–06 SASS Pretest;
- F. Focus Group Findings and Recommendations: Collection of Teacher Compensation Data Through SASS;
- G. Results of School District Data Collection Study: Potential for Collecting Teacher Salary and Benefit Data;
- H. Summary of the 2005–06 SASS Teacher Compensation Pilot Study;
- I. Using Administrative Record Data to Assess Self-Reported Wage Items in SASS: The Teacher Compensation Pilot Study, 2006
- J. Focus Group Findings and Recommendations: Principals' Attitudes Toward Teacher Evaluation and Dismissal;
- K. Summary of Findings and Recommendations: Telephone Interviews With Principals;
- L. Teacher Questionnaire Item Development for the 2007–08 SASS;
- M. Results of Using a Physical Location Definition for Schools in the 2007–08 SASS;
- N. 2007–08 SASS School Sample Allocation Procedure;
- O. Report on Results of Special Contact Districts;
- P. Changes Made to Variables During the Computer Edit, by Data File;
- Q. Quality Assurance for Data Capture and Mailout Operations;
- R. Imputation Changes to Variables, by Data File;
- S. Weighting Adjustment Cells;
- T. Frame and Created Variables; and
- U. Crosswalk Among Items in the 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, and 2007–08 SASS.

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## **Chapter 2. Changes in SASS Design, Content, and Methodology From 2003–04 to 2007–08**

Several changes in survey sample design, questionnaire content, procedures, and methodology were made for the 2007–08 Schools and Staffing Survey (SASS).

### **Design Changes**

#### **Changes to the Sample Design for 2007–08 SASS**

A number of changes were made in the sample design from the 2003–04 SASS to the 2007–08 SASS. Changes were made to the stratification, sample sizes, and school definition. Details on the sampling design used for the 2007–08 SASS are discussed in Chapter 4. Below are the highlights.

#### ***Schools***

- The affiliation strata for private schools were redefined into 11 groups rather than the previous 17 groups. All Lutheran schools were combined into one group. Amish, Mennonite, Assembly of God, Pentecostal, and Episcopal were dropped as separate groups, and folded into the “other religious” group.
- The process of collapsing public schools from the Common Core of Data (CCD) to obtain a better fit with the SASS definition of a school was continued from the 2003–04 survey, but the rules were modified in a few states: In Minnesota, the rules were revised to require candidates for collapsing to match on name, address, and phone number rather than on two of the three as in the 2003–04 SASS and the collapsing process was dropped entirely in Texas and Arizona. This was because the 2003–04 interviewing results indicated that the collapsing process failed to improve the sampling frame. Texas and Arizona joined New York, New Jersey, and Pennsylvania as states where no collapsing was done.
- The public charter school sample size was increased from 303 to 370 to improve the reliability of public charter school estimates and to avoid undersampling public charter schools relative to other public schools.
- All public charter schools were administered the Public School Questionnaire (With District Items). In the 2003–04 SASS, only those public charter schools not under a regular school district received the Unified School Questionnaire, which is the equivalent of the Public School Questionnaire (With District Items). This change was made because of the observation that charter schools under school districts often have different policies and hiring practices.
- The usual sample sizes that were selected for regular public schools were reduced in thirteen states that tended to have low standard errors. In these states, the sample size was reduced from 80, 80, and 20 schools selected from elementary, secondary, and combined schools respectively to 72, 72, and 17 respectively. This reduction was implemented in response to budget issues.
- The public school sampling frame was augmented with Career Technical Centers that were not on the original CCD. This was done to address concerns that the CCD does not provide good coverage of these types of schools. Subsequently, a small sample of these schools was selected from their own stratum.

#### ***Teachers***

- The Teacher Listing Form (TLF) was extensively redesigned. Race/ethnicity was no longer collected. For the experience question, an additional category was added to identify teachers with

20 or more years of experience. Also, a question was added concerning whether the school believes the teacher will be teaching in the same school the following school year. This question was added in an attempt to increase the number of teachers who leave the teaching profession (leavers) and who move to a new school (movers) that could be sampled for the 2008–09 Teacher Follow-up Survey (TFS).

- Since race/ethnicity was not collected on the TLF, no oversampling by race/ethnicity was implemented as had been done in the 2003–04 SASS. Among schools reporting that some teachers were not expected to be teaching in the same school the following year, these teachers were oversampled for the SASS teacher sample so as to increase the sample size of expected movers and leavers in TFS.

## **Content Changes**

Prior to the 2007–08 administration, extensive pretesting was undertaken. (For a detailed explanation of these processes, please refer to chapter 3.) As a result of this pretesting and changes in priorities for SASS, revisions were made to the 2003–04 SASS instruments. Table 2 includes a synopsis of actions (Deleted, Newly Added, Revised, or No Changes) that occurred to questionnaire items during the revision process. The items with 9000 series source codes are not included in the counts below because these are either respondent verification or contact information items that are not included on the restricted-use data files. Source codes are used to identify specific items on the SASS questionnaires. For each questionnaire item, the four-digit source code can be found to the left of the first answer choice.

**Table 2. Number of deleted, added, revised, and unchanged source codes, by questionnaire: 2007–08**

Questionnaire	Number of source codes not included	Number of source codes on the 2007–08 SASS			
		Total	Newly added	Revised	No changes
School District	191	119	14	31	74
Principal	61	182	36	12	134
Private School Principal	42	163	34	1	128
School	76	188	20	51	117
Private School	141	301	27	85	189
Public School (With District Items)	234	232	21	82	129
Teacher	68	339	31	123	185
Private School Teacher	68	367	31	134	202
School Library Media Center	53	62	14	36	12

NOTE: Source codes are used to identify specific items on the SASS questionnaires. For each questionnaire item, the four-digit source code can be found to the left of the first answer choice. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS) Questionnaires, 2003–04 and 2007–08.

Items that were deleted for this administration fell within the following topics: recruitment and hiring; school, teacher and student performance; homeschooling; professional development; principal experience, training, and working conditions; parent/guardian involvement; school conditions; course content; technology; special programs and services; charter school information; certification and training; and resources and assessments of students. More detailed information on the topics deleted within each questionnaire is presented below. The specific question numbers from the 2003–04 SASS are included in parentheses following the description.

Some of the new content included in the 2007–08 SASS delves into details about topics such as teacher dismissals; salary information; programs; attendance boundaries; Adequate Yearly Progress; time

allocated to specific subjects for students; teacher quality; length of school days for students; class organization; specialist and coaching assignments; voucher programs; staffing; experience; certification; and technology. Detailed information on questions that were added is presented in the section below. The specific question numbers from the 2007–08 SASS questionnaires are included in parentheses following the question wording for the items added.

An item crosswalk (by source codes) from all administrations of SASS since its initial launch in the 1987–88 school year, including 2007–08 items, is located in appendix U. Also included in this appendix are crosswalks that compare similarities and differences across the 2007–08 SASS questionnaires given to each type of respondent (i.e., public school district, school, principal, or teacher).

## School District Questionnaire

### ***School District Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following School District Questionnaire topics were not included in the 2007–08 SASS:

- criteria used in considering applicants for teaching, principal, and paraprofessional positions (13a–i, 20a–e, 23a–d);
- existence of formal procedures to counsel out poor-performing teachers (16);
- use of incentives to recruit principals (21);
- hiring of paraprofessionals to provide instructional support (22);
- range of full-time teachers' base salary (27);
- types of school performance reports and their uses (29a–j, 30a–e);
- whether district requires schools to participate in state/district assessments (31);
- whether students are assessed by state/district in math, reading, language arts, science, social studies, and history (32a–c, 33a–c, 34a–c, 35a–c);
- rewards or sanctions received by schools and districts based on student assessments (36, 37a–b, 38a–c, 39, 40a–b);
- presence of charter schools under district's authority (42a–b);
- offering of supplemental educational services to underperforming students (49);
- ability of students to take classes from a college or university (50);
- number of homeschooled students in district (51b);
- variety of services and materials offered to homeschooled students (52a–g);
- various achievement test requirements for homeschooled students (54–56);
- community service requirement (60a);
- various professional development opportunities for school or district administrators (63a–k);
- planning of professional development activities for teachers (64a–c);
- various sources of funding for teacher professional development (65a–h);
- use of pay incentives to reward completion of professional development (66c);
- various pay incentives used to recruit or retain teachers in particular fields (68a–l);
- training provided to prepare staff to teach in specified fields with shortages (70a–l); and
- various staff positions funded by Migrant Education Program funds (74a–c).

**School District Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS**

- Now thinking about head counts, around the first of October, how many part-time and full-time teachers employed by this district for grades K–12 and comparable ungraded levels were: Total teachers (9f)
- Does this district have an agreement with a principals' association or union for the purpose of meet-and-confer discussions or collective bargaining? (13)
- How many days is the normal contract year for a principal in this district? (14)
- Is there a tenure system for principals in this district? (15)
- Is there a salary schedule for PRINCIPALS in this district? (23)
- Thinking about the principals in this district this school year, what is the base salary of the lowest paid full-time principal? (24a)
- Thinking about the principals in this district this school year, what is the base salary of the highest paid full-time principal? (24b)
- What would be the normal yearly base salary for a teacher with a bachelor's degree and no teaching experience in this district? (26)
- Does the employer pay any funds into this plan? (Defined-contribution retirement plan for teachers) (29e1)
- Is one of the purposes of this district's "choice" program to ACHIEVE RACIAL BALANCE OR REDUCE RACIAL ISOLATION? (31b)
- In the past year, did your district adjust any school attendance boundaries? (35a)
- Was ACHIEVING RACIAL BALANCE OR REDUCING RACIAL ISOLATION one of the factors considered when boundaries were drawn? (35b)
- At the end of the LAST SCHOOL YEAR (2006–07), did this DISTRICT make Adequate Yearly Progress (AYP)? (44)
- At the end of the LAST SCHOOL YEAR (2006–07), was this DISTRICT identified for improvement due to Adequate Yearly Progress (AYP) requirements? (45)

**Principal Questionnaire****Principal Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS**

The following Principal Questionnaire topics were not included in the 2007–08 SASS:

- school positions held before becoming principal (6a–g);
- participation in training program for Indian education administration (8);
- whether school has budget for professional development (16);
- frequency of evaluation of improvement in classroom by professional development (20d);
- principal's participation in various professional development (21a–g);
- frequency of principal's participation in professional development with teachers in school (22);
- member of a national professional association of principals (23);
- percentage of teachers teaching to high academic standards (24);
- presence of formal school improvement plan and various ways to assess progress (26a–b);
- presence of school performance standards, whether school evaluated the previous year, and those results (27a–b, 28);
- receipt of rewards or sanctions based on school's performance (29a–c, 30a–h);
- whether school has a drug, alcohol, or tobacco use prevention program and existence of formal assessment procedures (31a–b);

- whether school has a violence prevention program and existence of formal assessment procedures (32a–b);
- extent to which various issues are a problem at school (37a–k);
- whether a written contract with school or regular opportunities for volunteering are offered to parents/guardians (39b, c); and
- whether school offers the following: log of parent participation, reliable system of communication with parents, requirement that teachers send information on lessons home to parents, requirement that teachers suggest activities that parents can do with child at home, requirement that teachers create homework assignments involving parents (40b, c, f, g, h).

**Principal Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS**

- Before you became a principal, did you have any management experience outside of the field of education? (7)
- Do you have a master's degree or higher in Education Administration? (9)
- In the past 12 months, have you participated in any professional development activities related to your role as a principal? (10)
- LAST school year (2006–07), what percentage of students had at least one parent or guardian participating in the following events? Volunteer in the school on a regular basis (21d)
- THIS school year (2007–08), does this school have the following? A service that allows parents to retrieve homework assignments (e.g., a website or an automated voice response system) (22b)
- Does this school have THIRD and/or EIGHTH grades? (23)
- Does this school have students enrolled in the THIRD GRADE? (24)
- How long is the TYPICAL FULL WEEK of school for THIRD GRADE students? Hours and minutes are both collected (25)
- During a TYPICAL FULL WEEK of school, approximately how many minutes do most THIRD GRADE students spend on the following activities at this school? English, reading, or language arts and how many were designated for reading instruction; Arithmetic or mathematics; Social studies or history; Science; Foreign Language (Not English as a Second Language [ESL]); Physical education; Music; Art; and Recess (26)
- Does this school have students enrolled in the EIGHTH GRADE? (27)
- How long is the TYPICAL FULL WEEK of school for EIGHTH GRADE students? Hours and minutes are both collected (28)
- During a TYPICAL FULL WEEK of school, approximately how many minutes do most EIGHTH GRADE students spend on the following activities at this school? English, reading, or language arts and how many were designated for reading instruction; Arithmetic or mathematics; Social studies or history; Science (29)
- For the 2007–08 school year, how many FULL-TIME K–12 CLASSROOM TEACHERS would you put in the following categories, based on your overall opinion of their TEACHING ABILITY? Outstanding Teachers; Good Teachers; Fair Teachers and of these Fair Teachers how many are tenured; Unsatisfactory Teachers and of these Unsatisfactory Teachers how many are tenured (30)
- At the end of the LAST school year (2006–07), did this school make Adequate Yearly Progress (AYP)? (32)
- At the end of the LAST school year (2006–07), was this school identified for improvement due to Adequate Yearly Progress (AYP) requirements? (33)
- How many days per year are you required to work under your current contract? (36)
- Are you represented under a meet-and-confer agreement or collective bargaining agreement? (37)

## **Private School Principal Questionnaire**

### ***Private School Principal Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following Private School Principal Questionnaire topics were not included in the 2007–08 SASS:

- school positions held before becoming principal (6a–g);
- number of months in contract for position (11);
- whether school has budget for professional development (15);
- frequency of evaluation of improvement in classroom by professional development (19c);
- principal's participation in various professional development (20a–g);
- frequency of principal's participation in professional development with teachers in school (21);
- member of a national professional association of principals (22);
- percentage of teachers teaching to high academic standards (23);
- whether school has a drug, alcohol, or tobacco use prevention program and existence of formal assessment procedures (25a–b);
- whether school has a violence prevention program and existence of formal assessment procedures (26a–b);
- extent to which various issues are a problem at school (31a–k);
- whether a written contract with school or regular opportunities for volunteering are offered to parents/guardians (33b, c); and
- whether school offers the following: log of parent participation, reliable system of communication with parents, requirement that teachers send information on lessons home to parents, requirement that teachers suggest activities that parents can do with child at home, requirement that teachers create homework assignments involving parents (34b, c, f, g, h).

### ***Private School Principal Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS***

- Before you became a principal or school head, did you have any management experience outside of the field of education? (7)
- Do you have a master's degree or higher in Education Administration? (9)
- In the past 12 months, have you participated in any professional development activities related to your role as a principal or school head? (10)
- LAST school year (2006–07), what percentage of students had at least one parent or guardian participating in the following events? Volunteer in the school on a regular basis (21d)
- THIS school year (2007–08), does this school have the following? A service that allows parents to retrieve homework assignments (e.g., a website or an automated voice response system) (22b)
- Does this school have THIRD and/or EIGHTH grades? (23)
- Does this school have students enrolled in the THIRD GRADE? (24)
- How long is the TYPICAL FULL WEEK of school for THIRD GRADE students? Hours and minutes are both collected (25)
- During a TYPICAL FULL WEEK of school, approximately how many minutes do most THIRD GRADE students spend on the following activities at this school? English, reading, or language arts and how many were designated for reading instruction; Arithmetic or mathematics; Social studies or history; Science; Foreign Language (Not English as a Second Language [ESL]); Physical education; Music; Art; and Recess (26)
- Does this school have students enrolled in the EIGHTH GRADE? (27)

- How long is the TYPICAL FULL WEEK of school for EIGHTH GRADE students? Hours and minutes are both collected (28)
- During a TYPICAL FULL WEEK of school, approximately how many minutes do most EIGHTH GRADE students spend on the following activities at this school? English, reading, or language arts and how many were designated for reading instruction; Arithmetic or mathematics; Social studies or history; Science (29)
- For the 2007–08 school year, how many FULL-TIME K–12 CLASSROOM TEACHERS would you put in the following categories, based on your overall opinion of their TEACHING ABILITY? Outstanding Teachers; Good Teachers; Fair Teachers and of these Fair Teachers how many are tenured; Unsatisfactory Teachers and of these Unsatisfactory Teachers how many are tenured (30)
- How many days per year are you required to work under your current contract? (34)

## School Questionnaire

### ***School Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following School Questionnaire topics were not included in the 2007–08 SASS:

- capacity of school building (9);
- presence of temporary buildings and their capacity (10a–b);
- routine use of common areas for instruction (11);
- whether teachers are without classrooms because of lack of space (12);
- whether school is operated by a private organization or company (15);
- whether school receives performance reports and what their uses are (20, 21a–e);
- whether school offers various courses on American Indian or Alaska Native topics (23a–b);
- whether school offers a separate program for students with discipline/adjustment problems or medical health care services beyond a school nurse (24a, b);
- whether schools provide interdisciplinary teaching or paired/team teaching (27d, e);
- whether class periods are scheduled in extended blocks (28);
- use of calendar where number of days exceeds mandatory number (29);
- whether any of the following are offered to students in grades 9–12: college credits, career learning, and job shadowing (32a, c, d);
- percentage of graduates with a diploma who went to a 2-year college (33c\_2YR);
- use of various methods to cover vacancies (39a–h);
- number of computers in school and number with internet access (40, 41);
- whether most students have access to Internet at school (42);
- number of computers used for instructional purposes (43);
- description of person helping teachers use technology (44);
- various methods used to identify students with limited-English proficiency (48a–g);
- whether school has instruction designed specifically for limited-English-proficient students (49);
- how limited-English-proficient students are taught English and other subject matter courses (50a–b, 51a–c);
- whether limited-English-proficient students are required to pass a test to complete program (52);
- whether outreach or referral services are offered to limited-English-proficient parents (54c);
- grade levels at which students are receiving Title I services (60);
- if school is a public charter school, then type of entity granting charter (65); and
- whether public charter school was originally a pre-existing school or was newly created (66).

**School Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS**

- At what time do most of the students in this school begin the school day? (10)
- How many days are in the school year for students in this school? (11)
- Does this school have its own website OR a web page that is located on the district's website? (13)
- How often is the website or web page updated? (14)
- Can teachers at this school have individual web pages located on the school's website or web page? (15)
- THIS school year (2007–08), does this school use the following methods to organize most classes or most students? Multi-age grouping (23d)
- THIS school year (2007–08), does this school use the following methods to organize most classes or most students? Block scheduling (23e)
- Are the following opportunities available for students in grades 9–12 in this school? Dual or concurrent enrollment that offers both high school and college credit funded by the school or district (26a)
- Are the following opportunities available for students in grades 9–12 in this school? Career and technical education courses (26b)
- Do any of the teachers or staff have the following specialist/coaching assignments in this school? Reading specialist; Math specialist; Science specialist; Reading coach; Math coach; Science coach (31)
- Around the first of October, how many teachers were newly hired by this school for grades K–12 and comparable ungraded levels? (34a)
- Of these newly hired teachers, how many were in their first year of teaching? (34b)
- Of the students enrolled in this school, do any have an Individual Education Plan (IEP) because they have special needs? (35a)
- How many students participate in the Title I program? Prekindergarten (44–None or All)
- How many students participate in the Title I program? Other students (K–12) (44–None or All)
- What is his or her work e-mail address? (52a)
- What is his or her home e-mail address? (52b)

**Private School Questionnaire****Private School Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS**

The following Private School Questionnaire topics were not included in the 2007–08 SASS:

- capacity of school building (10);
- presence of temporary buildings and their capacity (11a–b);
- routine use of common areas for instruction (12);
- whether teachers are without classrooms because of lack of space (13);
- whether school belongs to the Council of Islamic Schools in North America or the Institute for Independent Education (21);
- whether school is accredited by various agencies/organizations (22, 23a–e);
- community service requirement (31a–b);
- percentage of graduating students attending 2-year college (34b–2YR);
- whether schools provide interdisciplinary teaching or paired/team teaching (41d, e);
- whether class periods are scheduled in extended blocks (42);

- whether any of the following are offered to students in grades 9–12: college credits, career learning, and job shadowing (45a, c, d);
- whether school offers a separate program for students with discipline/adjustment problems or medical health care services beyond a school nurse (47a, b);
- use of various criteria for considering teaching applicants, paraprofessional staff (51a–j, 58a–d);
- use of various methods to cover vacancies (53a–h);
- number of teachers dismissed due to poor performance (54a–b);
- presence of formal procedures to counsel out poor performing teachers (55);
- number of months in contract year for teachers (56);
- whether paraprofessionals hired for instructional support (57);
- range of salaries for full-time teachers (62);
- use of pay incentives to reward professional development (64c);
- use of pay incentives to recruit or retain teachers in various fields (65, 66a–l);
- whether training/development program offered to aspiring administrators (67);
- whether school offers various professional development opportunities (68a–k);
- decision-making regarding teacher professional development (69a–c);
- sources of funding for teacher professional development activities (70a–f);
- whether training provided in various fields to prepare staff to teach in shortage areas (72a–l);
- number of computers in school and number with internet access (73, 74);
- whether most students have access to Internet at school (75);
- number of computers used for instructional purposes (76);
- description of person helping teachers use technology (77);
- various methods used to identify students with limited-English proficiency (82a–g);
- whether school has instruction designed specifically for limited-English-proficient students (83);
- how limited-English-proficient students are taught English and other subject matter courses (84a–b, 85a–c);
- whether outreach or referral services are offered to limited-English-proficient parents (88c);
- grade levels at which students are receiving Title I services (93); and
- where students receive Title I services (95).

***Private School Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS***

- At what time do most of the students in this school begin the school day? (8)
- Does this school have its own website? (11)
- How often is the website updated? (12)
- Can teachers at this school have individual web pages located on the school's website? (13)
- To which of the following associations or organizations does this school belong? Association of Classical and Christian Schools (ACCS) (22)
- To which of the following associations or organizations does this school belong? The Jewish Community Day School Network (RAVSAK) (22)
- To which of the following associations or organizations does this school belong? Association Montessori International (AMI) (22)
- Does this school currently have one or more students supported through a publicly-funded tuition voucher program? Yes → If so, how many students participate at this school? (27)
- Does this school currently have one or more students supported through a publicly-funded tuition voucher program? No → If not, is this school approved to receive students under a publicly-funded tuition voucher program? (27)

- THIS school year (2007–08), does this school use the following methods to organize most classes or most students? Multi-age grouping (29d)
- THIS school year (2007–08), does this school use the following methods to organize most classes or most students? Block scheduling (29e)
- Are the following opportunities available for students in grades 9–12 in this school? Dual or concurrent enrollment that offers both high school and college credit funded by the school (32a)
- Are the following opportunities available for students in grades 9–12 in this school? Career and technical education courses (32b)
- What is the minimum number of community service hours required of the high school graduates in the class of 2008? (40)
- Do any of the teachers or staff have the following specialist/coaching assignments in this school? Reading specialist; Math specialist; Science specialist; Reading coach; Math coach; Science coach (47)
- Of the students enrolled in this school as of October 1, do any have a formally identified disability? (49a)
- How many students participate in the Title I program? Prekindergarten students (57—None or All)
- How many students participate in the Title I program? Other students (K–12) (57—None or All)
- Of these newly hired teachers, how many were in their first year of teaching? (60b)
- LAST SCHOOL YEAR (2006–07), how many teachers of the following types were DISMISSED or did not have their contracts renewed as a result of poor performance? Non-tenured teachers; Tenured teachers (62)
- What would be the normal yearly base salary for a teacher with a bachelor's degree and no teaching experience in this school? (64)
- Thinking about the teachers in this school this school year, what is the base salary of the lowest paid full-time teacher? (66a)
- Thinking about the teachers in this school this school year, what is the base salary of the highest paid full-time teacher? (66b)
- Does this school offer the following to any teachers? Defined-contribution retirement plan and does the employer pay any funds into this plan? (67e)
- Does this school currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to—Recruit or retain teachers to teach in a less desirable location? (68c)
- Does this school currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to—Recruit or retain teachers to teach in fields of shortage? (68d)
- How many days is the normal contract year for a teacher in this school? (69)
- What is his or her work e-mail address? (72a)
- What is his or her home e-mail address? (72b)
- Please verify this school's or program's name and mailing address that are printed on the front of this questionnaire. If any part of the name and mailing address is incorrect, enter the correction(s), as necessary, in the appropriate space(s) below: school or program name (76-school), mailing address (76-address), city (76-city), state (76-state), and ZIP code + 4 (76-ZIP);
- Is the physical or street address of this school or program the same as the mailing address? (77a)
- Please print this school's or program's physical or street address: street (77b-address), city (77b-city), state (77b-state), and ZIP code (77b-ZIP); and
- What is the SCHOOL e-mail address? (78)

## Public School Questionnaire (With District Items)

### ***Public School Questionnaire (With District Items)—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following Public School Questionnaire (With District Items) topics were not included in the 2007–08 SASS:

- capacity of school building (10);
- presence of temporary buildings and their capacity (11a–b);
- routine use of common areas for instruction (12);
- whether teachers are without classrooms because of lack of space (13);
- whether school is operated by a private organization or company (16);
- whether school receives performance reports and what their uses are (20, 21a–e);
- whether school is required to participate in state/district assessment program (22);
- whether students are assessed by state/district in math, reading, language arts, science, social studies, and history (23a–c, 24a–c, 25a–c, 26a–c);
- rewards or sanctions received by schools and districts based on student assessments (27, 28a–b, 29a–c, 30, 31a–b);
- various sanctions due to poor student achievement school may have received (32a–h);
- whether school offers various courses on American Indian or Alaska Native topics (34a–b);
- whether school offers a separate program for students with discipline/adjustment problems or medical health care services beyond a school nurse (35a, b);
- whether schools provide interdisciplinary teaching or paired/team teaching (38d, e);
- whether class periods are scheduled in extended blocks (39);
- use of calendar where number of days exceeds mandatory number (40);
- whether any of the following are offered to students in grades 9–12: college credits, career learning, and job shadowing (43a, c, d);
- offering of supplemental educational services to underperforming students at no cost (44);
- community service requirement (48a–b);
- percentage of graduates with a diploma who went to a 2-year college (50c\_2YR);
- use of various methods to cover vacancies (56a–h);
- use of various criteria for considering applicants for teaching, principal, and paraprofessional staff positions (58a–i, 64a–e, 66a–d);
- number of teachers dismissed due to poor performance (60a–b);
- presence of formal procedures to counsel out poor performing teachers (61);
- whether paraprofessionals hired for instructional support (65);
- range of salaries for full-time teachers (70);
- use of pay incentives to reward professional development (72c);
- use of pay incentives to recruit or retain teachers in various fields (73, 74a–l);
- decision-making regarding teacher professional development (75a–c);
- sources of funding for teacher professional development activities (76a–g);
- whether training provided in various fields to prepare staff to teach in shortage areas (78a–l);
- number of computers in school and number with internet access (79, 80);
- whether most students have access to Internet at school (81);
- number of computers used for instructional purposes (82);
- description of person helping teachers use technology (83);
- various methods used to identify students with limited-English proficiency (87a–g);

- whether school has instruction designed specifically for limited-English-proficient students (88);
- how limited-English-proficient students are taught English and other subject matter courses (89a–b, 90a–c);
- whether outreach or referral services are offered to limited-English-proficient parents (93c);
- grade levels at which students are receiving Title I services (99);
- if school is a public charter school, then type of entity granting charter (104);
- whether public charter school was originally a pre-existing school or was newly created (105);
- variety of services and materials offered to homeschooled students (107a–g); and
- various achievement test requirements for homeschooled students (109a–b, 110a–b, 111a–b).

***Public School Questionnaire (With District Items)—Questions That Collected the Following Data Were Added to the 2007–08 SASS***

- At what time do most of the students in this school begin the school day? (10)
- Does this school have its own website OR a web page that is located on the district's website? (13)
- How often is the website or web page updated? (14)
- Can teachers at this school have individual web pages located on the school's website or web page? (15)
- THIS school year (2007–08), does this school use the following methods to organize most classes or most students? Multi-age grouping (23d)
- THIS school year (2007–08), does this school use the following methods to organize most classes or most students? Block scheduling (23e)
- Are the following opportunities available for students in grades 9–12 in this school? Dual or concurrent enrollment that offers both high school and college credit funded by the school or district (26a)
- Are the following opportunities available for students in grades 9–12 in this school? Career and technical education courses (26b)
- What is the minimum number of community service hours required of the high school graduates in the class of 2008? (30)
- Do any of the teachers or staff have the following specialist/coaching assignments in this school? Reading specialist; Math specialist; Science specialist; Reading coach; Math coach; Science coach (36)
- Around the first of October, how many teachers were newly hired by this school, for grades K–12 and comparable ungraded levels? (39a)
- Of these newly hired teachers, how many were in their first year of teaching? (39b)
- LAST SCHOOL YEAR (2006–07), how many teachers of the following types were DISMISSED or did not have their contracts renewed as a result of poor performance? Non-tenured teachers; Tenured teachers (42)
- What would be the normal yearly base salary for a teacher with a bachelor's degree and no teaching experience in this school? (44)
- Thinking about the teachers in this school this school year, what is the base salary of the lowest paid full-time teacher? (46a)
- Thinking about the teachers in this school this school year, what is the base salary of the highest paid full-time teacher? (46b)
- Does this school offer the following to any teachers? Defined-contribution retirement plan and does the employer pay any funds into this plan? (47e)

- Does this school currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to - Recruit or retain teachers to teach in a less desirable location? (48c)
- Does this school currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to - Recruit or retain teachers to teach in fields of shortage? (48d)
- How many days is the normal contract year for a teacher in this school? (50)
- Of the students enrolled in this school, do any have an Individual Education Plan (IEP) because they have special needs? (51a)
- How many students participate in the Title I program? Prekindergarten students (61—None or All)
- How many students participate in the Title I program? Other students (K–12) (61—None or All)
- What is his or her work e-mail address? (71a)
- What is his or her home e-mail address? (71b)

## Teacher Questionnaire

### ***Teacher Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following Teacher Questionnaire topics were not included in the 2007–08 SASS:

- whether teacher has taken an exam for National Board for Professional Teaching Standards certification (24e);
- various characteristics of teacher preparation (25a–d);
- number of teaching methods/strategies courses completed before started teaching (28);
- method by which teaching methods or teaching strategies coursework was obtained (29);
- whether received reduced number of preparations in first year of teaching (35b);
- whether various duties part of first-year teaching assignments (35a–c);
- whether mentor had same subject area in teacher’s first year (37b);
- extent to which master teacher helped during first year (38);
- participation in various professional development activities (39a–d);
- various types of support received for professional development (45a–f);
- various rewards received for professional development (46a–c);
- various activities in which teacher participated in past 12 months (47a–d);
- types of support received for students with an Individual Education Plan (50a–c);
- access to and uses of students’ achievement scores (54, 55a–c);
- extent to which state/district standards guide instructional practice (56);
- influence teachers have over school policy in various areas (61a–g);
- opinions on: whether principal lets staff know what is expected, satisfaction with class size, whether coordinate course content with other teachers, whether feel it’s a waste of time to be a teacher (63a, 63p, 63r, 63t);
- frequency of various types of problems with students at school (64a–m); and
- extent to which pregnancy is problem with students at school (65e).

**Teacher Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS**

- How many days are covered by your contract? (5)
- During your most recent FULL WEEK of teaching at THIS school, what was the average number of students you taught at any one time? (19)
- Have you earned any of the degrees or certificates listed below? Educational specialist or professional diploma (at least one year beyond master's level); Certificate of Advanced Graduate Studies and Was this degree awarded by a University's Department or College of Education, or a college's Department or School of Education? (26b5–6d)
- Did any of your coursework result in a concentration or specialization in READING? (27)
- Did you enter teaching through an alternative certification program? (31)
- Are you certified by the National Board for Professional Teaching Standards in at least one content area? (32a)
- Are you working toward National Board Certification? (32b)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (33b2)
- Does this certificate marked in item 33a allow you to teach in additional content areas (33c, 33e, 33g, 33i)
- In what ADDITIONAL content area does the certificate marked in item 33a allow you to teach? Code and Content Area (33f1, 33h1, 33j1)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (33d2, 33f2, 33h2, 33j2)
- Using Table 3, in what content area(s) does this other teaching certificate, marked in 34b above allow you to teach in THIS state? Code and Content Area (34c1)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (34c2, 34e2, 34g2, 34i2, 34k2)
- Does this certificate marked in item 34b allow you to teach in additional content areas? (34d, 34f, 34h, 34j)
- In what ADDITIONAL content area does this other current teaching certificate (described above in item 34b) allow you to teach? Code and Content Area (34e1, 34g1, 34i1, 34k1)
- This school year, are you a Highly Qualified Teacher (HQT), according to your state's requirements? (35a)
- Do you meet your state's requirements for a Highly Qualified Teacher in at least one subject that you teach? (35b)
- In the last 3 years, how many hours did you spend on these activities? (45b)
- Overall, how useful were these activities to you? (45c)
- In the last 3 years, how many hours did you spend on these activities? (46b)
- Overall, how useful were these activities to you? (46c)
- In the LAST SCHOOL YEAR how much of your own money did you spend on classroom supplies, without reimbursement? (52)
- Do you use the following to communicate with parents or students outside of the regular school day? E-mail or list-serve to send out group updates or information; E-mail to address individual questions or concerns; Online bulletin board for class discussion; Course or teacher web page; Course or teacher blog; Real-time, typed “conversations” through instant messaging? (53a–f)
- The following questions refer to your before-tax earnings from teaching and other employment. DURING THE SUMMER OF 2007, did you have any earnings from—Teaching summer school in this or any other school? Did all of these earnings come from your current school or district? (61a1)

- The following questions refer to your before-tax earnings from teaching and other employment. DURING THE SUMMER OF 2007, did you have any earnings from—Working in a nonteaching job in this or any other school? Did all of these earnings come from your current school or district? (61b1)
- The survey you have completed may involve a brief follow-up at a later time in order to gain information on teachers' movements in the labor force. The following information would assist us in contacting you if you have moved or changed jobs. Work e-mail address; Home e-mail address. (72k–l)
- What are the names and addresses of two other people who would know where to get in touch with you during the coming years? First person—work e-mail address; home e-mail address. (73–1i)
- What are the names and addresses of two other people who would know where to get in touch with you during the coming years? Second person—work e-mail address; home e-mail address. (73–2j)

## **Private School Teacher Questionnaire**

### ***Private School Teacher Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following Private School Teacher Questionnaire topics were not included in the 2007–08 SASS:

- whether teacher has taken an exam for National Board for Professional Teaching Standards certification? (24e);
- various characteristics of teacher preparation (25a–d);
- number of teaching methods/strategies courses completed before started teaching (28);
- method by which teaching methods or teaching strategies coursework was obtained (29);
- whether received reduced number of preparations in first year of teaching (36b);
- whether various duties part of first-year teaching assignments (37a–c);
- whether mentor had same subject area in teacher's first year (38b);
- extent to which master teacher helped during first year (39);
- participation in various professional development activities (40a–d);
- various types of support received for professional development (46a–f);
- various rewards received for professional development (47a–c);
- various activities in which teacher participated in past 12 months (48a–d);
- types of support received for students with an Individual Education Plan (51a–c);
- access to and uses of students' achievement scores (55, 56a–c);
- extent to which state/district standards guide instructional practice (57);
- influence teachers have over school policy in various areas (62a–g);
- opinions on: whether principal lets staff know what is expected, satisfaction with class size, whether coordinate course content with other teachers, whether feel it's a waste of time to be a teacher (64a, 64p, 64r, 64t);
- frequency of various types of problems with students at school (65a–m); and
- extent to which pregnancy is problem with students at school (66e).

**Private School Teacher Questionnaire—Questions That Collected the Following Data  
Were Added to the 2007–08 SASS**

- How many days are covered by your contract? (5)
- During your most recent FULL WEEK of teaching at THIS school, what was the average number of students you taught at any one time? (19)
- Have you earned any of the degrees or certificates listed below? Educational specialist or professional diploma (at least one year beyond master's level); Certificate of Advanced Graduate Studies and Was this degree awarded by a University's Department or College of Education, or a college's Department or School of Education? (26b5–6d)
- Did any of your coursework result in a concentration or specialization in READING? (27)
- Did you enter teaching through an alternative certification program? (31)
- Are you certified by the National Board for Professional Teaching Standards in at least one content area? (32a)
- Are you working toward National Board Certification? (32b)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (33b2)
- Does this certificate marked in item 33a allow you to teach in additional content areas (33c, 33e, 33g, 33i)
- In what ADDITIONAL content area does the certificate marked in item 33a allow you to teach? Code and Content Area (33d1, 33f1, 33h1, 33j1)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (33d2, 33f2, 33h2, 33j2)
- Using Table 3, in what content area(s) does the teaching certificate, marked above allow you to teach in THIS state? Code and Content Area (34c1)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (34c2, 34e2, 34g2, 34i2, 34k2)
- Does this certificate marked in item 34b allow you to teach in additional content areas? (34d, 34f, 34h, 34j)
- In what ADDITIONAL content area does the certificate marked in item 34b allow you to teach? Code and Content Area (34e1, 34g1, 34i1, 34k1)
- Using Table 3 on page 18, in what content area(s) does this other teaching certificate, marked in 35b above allow you to teach in THIS state? Code and Content Area (35c1)
- Which of the following grade ranges does this certificate apply to? Early Childhood, preschool and any of grades K–5; Any of grades 6–8; Any of grades 9–12 (35c2, 35e2, 35g2, 35i2, 35k2)
- Does this certificate marked in item 35b allow you to teach in additional content areas? (35d, 35f, 35h, 35j)
- In what ADDITIONAL content area does this other current teaching certificate (described above in item 35b) allow you to teach? Code and Content Area (35e1, 35g1, 35i1, 35k1)
- In the last 3 years, how many hours did you spend on these activities? (45b)
- Overall, how useful were these activities to you? (45c)
- In the last 3 years, how many hours did you spend on these activities? (46b)
- Overall, how useful were these activities to you? (46c)
- In the LAST SCHOOL YEAR how much of your own money did you spend on classroom supplies, without reimbursement? (52)
- Do you use the following to communicate with parents or students outside of the regular school day? E-mail or list-serve to send out group updates or information; E-mail to address individual questions or concerns; Online bulletin board for class discussion; Course or teacher web page; Course or teacher blog; Real-time, typed “conversations” through instant messaging? (53a–f)

- The survey you have completed may involve a brief follow-up at a later time in order to gain information on teachers' movements in the labor force. The following information would assist us in contacting you if you have moved or changed jobs. Work e-mail address; Home e-mail address. (72k–l)
- What are the names and addresses of two other people who would know where to get in touch with you during the coming years? First person—work e-mail address; home e-mail address. (73–1i)
- What are the names and addresses of two other people who would know where to get in touch with you during the coming years? Second person—work e-mail address; home e-mail address. (73–2j)

## School Library Media Center Questionnaire

### ***School Library Media Center Questionnaire—2003–04 SASS Topics Not Included in the 2007–08 SASS***

The following School Library Media Center Questionnaire topics were not included in the 2007–08 SASS:

- organization of library media center (1);
- total seating capacity (2);
- various types of areas present in library media center (3a–g);
- number of paid professional staff by highest degree (8a–d);
- whether a telephone, fax machine, or VCR is available in library media center (13a, b, f);
- member of consortium purchasing rights to tape programs (15);
- copyright years of encyclopedia and world atlas (16a–b);
- previous year's number of CD-ROM titles, number acquired during previous year, and amount spent for rental and purchase (18c);
- whether library subscribed to current magazines, journals, or newspapers, number of subscriptions and amount spent (19a–c);
- access to electronic databases of periodical articles at no charge (20);
- whether library purchased access to any electronic databases and amount spent on them (21a–b);
- whether library received any computer hardware donations, grants, or other contributions and the value of those donations (23a–b);
- whether library received any audio-visual equipment donations, grants, or other contributions and the value of those donations (24a–b);
- amount of influence various staff have on scheduling classes in library (27a–d);
- whether library used to provide teacher release or preparation time (28);
- whether various resources can be taken out of the library by students (33a–f);
- whether various persons are allowed to check out materials (34a–c);
- whether school follows formal state/district and school content standards in information literacy (38a–b);
- whether school follows formal state/district and school level information literacy curriculum (39a–b); and
- percentage of teachers collaborated with library staff to plan and deliver instruction (41).

**School Library Media Center Questionnaire—Questions That Collected the Following Data Were Added to the 2007–08 SASS**

- Does this school have a library media center? (1)
- During the most recent full week of school, how many times did students visit the library media center? (8)
- During the most recent full week of school, what was the total number of books and other materials checked out from the library media center? (9)
- Does this library media center provide support for the following programs? Family literacy activities (10a)
- Does this library media center provide support for the following programs? Book clubs (10b)
- How many of the paid professional library media center staff are state-certified as classroom teachers? (18)
- Does this library media center provide students access to online, licensed databases? (23)
- Does the library media center also provide access to online, licensed databases to students from the following locations? In the classroom (24a)
- Does the library media center also provide access to online, licensed databases to students from the following locations? At home (24b)
- Are the following available within this library media center? Media retrieval system (25d)
- Are the following available within this library media center? Laptops for student use outside of the library media center (25e)
- Are the following available within this library media center? Laptops for staff use outside of the library media center (25f)
- Does this school have formal information literacy standards? (26)
- Does this school follow a formal information literacy curriculum? (27)
- Who teaches this school's information literacy curriculum? (28)

## **Methodological and Procedural Changes**

### **Return to Mail/Telephone Follow-up/Field Data Collection**

The data collection procedures for all questionnaires, with the exception of the School District Questionnaire, changed substantially from the 2003–04 SASS to the 2007–08 SASS. In the 2003–04 SASS, field representatives were responsible for all of the SASS data collection activities for each of the sampled schools. The 2007–08 SASS returned to the traditional methodology of a mail-based survey, with telephone and field follow-up. The main features of this methodology included the following:

- mailing an advance letter to sampled schools in early summer to verify school addresses;
- mailing the school package<sup>2</sup> at the beginning of the school year;
- telephoning the school using a computer-assisted telephone interviewing (CATI) instrument (the Screener instrument) to verify school information, establish a survey coordinator, and follow up on the Teacher Listing Form (the survey coordinator was the main contact person at the school for subsequent communication);

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<sup>2</sup> The SASS school package contained a cover letter to the principal, a cover letter to the survey coordinator, the Teacher Listing Form, Principal Questionnaire/Private School Principal Questionnaire, School Questionnaire/Public School Questionnaire (With District Items)/Private School Questionnaire, School Library Media Center Questionnaire (for public and BIE-funded schools only), postage-paid return envelopes, an NCES pamphlet detailing general information about SASS, an NCES brochure detailing some of the findings from the 2003–04 SASS, and the *Statistical Abstract of the United States: 2007 CD*.

- mailing a second package of outstanding questionnaires to the survey coordinator;
- mailing Teacher Questionnaires on a flow basis as teachers were sampled from the data provided on the Teacher Listing Form;
- conducting field follow-up for schools that had not returned the Teacher Listing Form;
- telephoning the school from the telephone centers to remind the survey coordinator to have staff complete and return all forms (including Teacher Questionnaires, when applicable);
- telephoning the individual survey respondents (principal, librarian, teacher) from the telephone centers to attempt to complete the questionnaire with them over the phone;
- conducting field follow-up for schools and their corresponding teachers that had not returned their questionnaires; and
- sending additional reminder mailings to nonresponding teachers.

Chapter 5 on data collection provides details on the methodology for the 2007–08 SASS. A brief evaluation of the methodology is included at the end of chapter 5.

## **Centralized Screening**

In the 2003–04 SASS, field representatives screened sampled schools by verifying their grade range, address, and school type. This information was used to verify that the sampled school was in-scope for SASS (i.e., eligible for SASS). In the 2007–08 SASS, screening was centralized and took place in the Jeffersonville and Tucson Telephone Centers, using a CATI instrument (the Screener instrument). During the telephone call, interviewers verified the school name, physical and mailing addresses, grade range, and school type, obtained the school principal’s name, established a survey coordinator, collected the survey coordinator’s contact information (direct phone number, best time to call, e-mail address), and confirmed receipt of the Teacher Listing Form. Centralized screening was beneficial in terms of cost; as well, supervisors could directly monitor progress and listen-in on interviews to ensure that procedures were being followed correctly.

## **Survey Coordinators**

One of the main purposes of the CATI Screener operation was to establish a survey coordinator. A survey coordinator was the main contact person at the school. Future correspondence (replacement questionnaires, Teacher Questionnaires, and a reminder postcard) was addressed to the survey coordinator, who was asked to pass out the questionnaires to the appropriate staff, follow-up with the staff members, and return the completed questionnaires to the U.S. Census Bureau. Reminder telephone calls were made to the survey coordinator, rather than individual respondents, which expedited the process of following-up on outstanding questionnaires and was less burdensome to the school. Survey coordinators were established in approximately 73 percent of sampled schools.

## **Reminder Telephone Follow-up Prior to Nonresponse Follow-up**

In previous administrations of SASS that utilized the mailout/telephone follow-up/field follow-up methodology, the telephone centers conducted a nonresponse follow-up operation following the second mailout that focused on collecting data from nonrespondents. CATI interviews accounted for between 7.2 percent and 26.7 percent of completed interviews (depending on questionnaire type) in the 1999–2000 SASS. In the 2007–08 SASS, a CATI Reminder operation was conducted prior to the telephone center’s nonresponse follow-up operation and field nonresponse follow-up. During this operation, telephone center interviewers contacted the survey coordinator to remind them to complete, or to have appropriate respondents complete, the outstanding forms and mail them to the U.S. Census Bureau. Reminding the

survey coordinator, who would in turn remind the other respondents, substantially decreased the number and length of phone calls; therefore, reducing burden on the schools and the cost of follow-up.

### **Earlier Start to Data Collection Schedule**

In previous administrations of SASS, the Teacher Listing Form was mailed to schools prior to mailing the Principal Questionnaire, School Questionnaire, and School Library Media Center Questionnaire (public and BIE-funded schools only). In the 2007–08 SASS, the initial package contained all of the school-level questionnaires and was mailed to schools at the end of August, enabling data collection to begin much earlier than in previous administrations. Starting data collection earlier allowed for more time in between follow-up operations, providing time for questionnaires to be received and removed from the workload prior to the next phase of follow-up. Data collection for the school-level questionnaires (Principal, School, and School Library Media Center Questionnaires) was originally scheduled to close out at the end of February 2008, but was extended to mid-March due to an unforeseeable delay in mailing replacement questionnaires to respondents. Data collection for Teacher Questionnaires was scheduled to close out at the end of April 2008, but was extended to mid-May. See chapter 5 for a detailed description of the data collection schedule and methodology.

## Chapter 3. Preparation for the 2007–08 SASS

The National Center for Education Statistics (NCES) and the U.S. Census Bureau continually work to improve questionnaires and procedures for the Schools and Staffing Survey (SASS). Prior to the administration of the 2007–08 SASS, the survey and methodology were tested iteratively and improved. Methodological changes were based on experience conducting previous SASS studies and on debriefings conducted with U.S. Census Bureau telephone center staff and field staff (field representatives). A summary of the research conducted is presented in exhibit 1, and the full reports are included as appendixes C through L.

**Exhibit 1. Summary of research conducted for the 2007–08 SASS**

Title	Methodology	Study period	Respondent(s)	Key areas of focus
Summary of the 2005–06 SASS Methodological Pretest Findings and Recommendations for the 2007–08 SASS	Field test	10/2005– 2/2006	ALL	Methodology
Analysis of Changes to the 2005–06 Pretest Teacher Listing Form and TFS-1(X) and Recommendations for the 2007–08 SASS and 2008–09 TFS	Field test	10/2005– 10/2006	School	Content of the TLF to aid in teacher sampling
Quality of Address Corrections From FirstData for Schools in the 2005–06 SASS Pretest	Field test	7/2005– 12/2005	School	Methodology
Focus Group Findings and Recommendations: Collection of Teacher Compensation Data Through SASS	Focus groups	1/2006	District and Teacher	Teacher compensation and dismissal
Results of School District Data Collection Study: Potential for Collecting Teacher Salary and Benefit Data	Field test	4/2006– 5/2006	District	Teacher compensation
Summary of the 2005–06 SASS Teacher Compensation Pilot Study	Field test	4/2006– 6/2006	District	Teacher compensation
Using Administrative Record Data to Assess Self-Reported Wage Items in SASS: The Teacher Compensation Pilot Study, 2006	Analysis	4/2006– 6/2006	District and Teacher	Teacher compensation and benefits
Focus Group Findings and Recommendations: Principals' Attitudes Toward Teacher Evaluation and Dismissal	Focus groups	4/2006	Principal	Teacher evaluation and dismissal
Summary of Findings and Recommendations: Telephone Interviews With Principals	Focus groups	7/2006	Principal	Teacher dismissal
Teacher Questionnaire Item Development for the 2007–08 SASS	Cognitive interviews	6/2005– 12/2005	Teacher	Class organization, certification, and working conditions

## Research on New SASS Methodology

### SASS Pretest

For the 1999–2000 SASS, selected schools were sent questionnaires by mail. Nonrespondents were contacted first by telephone (using computer-assisted telephone interviewing [CATI] instruments for most questionnaires) and ultimately by field representatives. In an attempt to shorten the data collection period for SASS and increase response rates, an in-person field-based methodology was used for the 2003–04 SASS. Although this methodology had some benefits over the traditional mail-based survey approach, the field efforts were too variable with regard to cost-effectiveness, data quality, and efficiency of field operations. Therefore, planning for the 2007–08 SASS was based on returning to the mail-based survey approach, with subsequent telephone and field follow-up. The purpose of the SASS pretest, conducted in 1,100 public and private schools from October 2005 to January 2006, was to determine whether there were ways to increase the response rates prior to the commencement of field follow-up activities. A complete report of the methodology and detailed findings can be found in “Appendix C. Summary of the 2005–06 SASS Methodological Pretest Findings and Recommendations for the 2007–08 SASS.”

### Methods

The pretest methodology varied by group in an effort to answer the following questions through an experimental design:

- Would establishing a school coordinator at the school improve response rates prior to field follow-up? A school coordinator would be the main contact person at the school, would facilitate data collection by passing out questionnaires to the appropriate staff, would remind the staff to complete them, and would collect the questionnaires to return to the Census Bureau.
- Would paying a small incentive (\$20) to a school coordinator at the school improve response rates prior to field follow-up?
- Would sending the advance letter and Teacher Listing Form (TLF) via FedEx, rather than first-class mail, improve response rates prior to field follow-up?

The sample was split into three groups: school coordinator with an incentive, school coordinator without an incentive, and no school coordinator. This was done to test whether establishing a school coordinator and whether paying this person a small incentive improves response rates prior to field follow-up. Each group was split into two sub-groups, United States Postal Service (USPS) delivery and FedEx delivery, to test whether sending the advance letter and Teacher Listing Form by FedEx improves response rates prior to field follow-up.

The SASS pretest utilized a mail-based survey approach with CATI and field follow-up. The first contact with the school was an advance letter and Teacher Listing Form (TLF). The school was then “screened” to determine whether the school was in-scope or out-of-scope and to establish a school coordinator, when appropriate. Staff from schools in the school coordinator with an incentive group who agreed to participate as school coordinators were immediately sent a \$20 gift card along with the school’s questionnaires.

Following the screener operation, the telephone center contacted schools that had not returned their TLF to ask them to return it by mail, complete it over the phone, or complete it via fax. The data from the TLFs were used as the sampling frame for teachers. Teachers with less than 3 years of experience were oversampled in order to glean more information from new teachers. Most teachers who were unlikely to be teaching in the school the following school year were sampled in order to test the extent to which the

new question on the TLF identified teachers who would not be teaching at the same school the following school year. The modifications to the TLF and their effectiveness in identifying teachers who would move to another school or leave the teaching profession are described in the following section on the Teacher Listing Form and the Teacher Follow-up Survey.

After the TLF telephone follow-up, the telephone center staff conducted a CATI reminder operation, calling schools that had returned their TLF to remind them to complete and return remaining questionnaires, including Teacher Questionnaires. Schools with outstanding TLFs went to field follow-up. However, the procedures for field follow-up varied by regional office (RO) in order to determine which procedures were most efficient and resulted in higher response rates. In the Detroit RO, field staff contacted schools regarding their TLF only, while the telephone center contacted these schools regarding the status of the other school-level questionnaires.<sup>3</sup> In the Charlotte RO, field staff contacted schools regarding all of their school-level questionnaires. Telephone interviewers and/or field representatives contacted the school coordinator, if one had been established, to follow-up on the status of the questionnaires and provided replacement questionnaires upon request. At the conclusion of the telephone reminder operation and field follow-up, the telephone center called schools and attempted to complete the questionnaires over the phone with the appropriate respondent as a final data collection effort. The response rates for each questionnaire are presented in table 3.

**Table 3. Unweighted response rates (in percent) for coordinator and mail test groups by questionnaire: 2005–06 SASS pretest**

Questionnaire	Total response rates	Coordinator group response rates			Mail group response rates	
		Coordinator, incentive	Coordinator, no incentive	No coordinator	USPS <sup>1</sup>	FedEx
Teacher Listing Form	87.9	86.7	86.3	90.6	88.6	87.2
Principal	78.4	79.0	75.8	80.1	78.3	78.4
School	78.7	80.2	75.7	79.9	79.0	78.4
School Library Media Center	83.9	84.4	81.6	85.7	83.0	84.7
Teacher	71.0	78.3	78.5	57.2	70.7	71.3

<sup>1</sup> USPS refers to the United States Postal Service.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Schools and Staffing Survey (SASS) Pretest, 2005–06 (previously unpublished tabulation).

### **Key Findings**

- Although establishing a school coordinator did not significantly improve response rates of individual school-level questionnaires, it did increase the proportion of schools that completed all of the questionnaires, improved response rates for Teacher Questionnaires, and facilitated data collection.
- Providing a monetary incentive to the school coordinator did not significantly improve response rates. A resource that could be beneficial for the school, such as a high quality, eye-catching, easy-to-read pamphlet presenting previous SASS results may be a more effective tool.
- Sending the school package via FedEx, rather than USPS, did not significantly improve response rates. A well-designed, high quality envelope that will be noticeable to school staff, sent via USPS, may be beneficial.

<sup>3</sup> School-level questionnaires included the Teacher Listing Form, Principal Questionnaire or Private School Principal Questionnaire, School Questionnaire or Private School Questionnaire, and the School Library Media Center Questionnaire (for public schools only).

- It was more effective to have field representatives follow-up on only the TLF in the fall and to have subsequent reminder telephone calls after the field operation ended than to follow-up on all of the school-level questionnaires at once.
- As part of the SASS pretest, a question was added to the Teacher Questionnaires to determine whether teachers would provide e-mail addresses that could be used to contact them regarding the Teacher Follow-up Survey (TFS). Approximately 70 percent of the teachers who returned a completed questionnaire provided either their home or work e-mail address.

## **Teacher Listing Form (TLF) and Teacher Follow-up Survey (TFS)**

The Teacher Follow-up Survey (TFS) is conducted in the year following SASS. The sampling frame for the TFS is composed of the teachers who participated in SASS. The purpose of this survey is to obtain teacher attrition rates as well as information about current teachers' main assignment field, experiences, and satisfaction and about former teachers' current employment and reasons for leaving the teaching profession. In the 2005–06 SASS pretest, the Teacher Listing Form (TLF) was modified in an attempt to sample more teachers who would be moving to another school or leaving the teaching profession before the following school year. Early in the 2006–07 school year, schools were contacted to find out the current teaching status of the teachers who participated in the 2005–06 SASS pretest. This effort provided feedback on how effective the modifications to the TLF were. A complete report of the methodology and detailed findings can be found in "Appendix D. Analysis of Changes to the 2005–06 SASS Pretest Teacher Listing Form and TFS-1(X) and Recommendations for the 2007–08 SASS and 2008–09 TFS."

### **Methods**

The TLF for the SASS pretest was modified to include an additional item that asked, "Do you think it is likely that this teacher will be teaching in THIS school next school year?" In addition, the teaching experience response options were revised to glean more information about each teacher's level of experience. The experience question previously allowed for responses in only two categories: 3 or fewer years and more than 3 years. The revised question split the more experienced category into two categories: 4–19 years and 20 or more years.

In the fall of 2006, the TFS-1(X) form was mailed to schools who participated in the 2005–06 SASS pretest. This form listed the name of each teacher who completed the SASS Teacher Questionnaire and requested that the school staff member mark the appropriate occupational status from the following options: (1) teaching in this school; (2) teaching, but not in this school; (3) not teaching, but working in this school; (4) on leave, returning this school year to this school; (5) on leave, not returning this school year (e.g., extended maternity/paternity leave, disability, sabbatical, or military leave); (6) left this school, not currently teaching (e.g., retired, working in another occupation, homemaking, or child rearing); (7) left this school, occupational status unknown; or (8) deceased.

Table 4 summarizes the accuracy with which the TLF data predicted the teachers' statuses for the following school year.

**Table 4. Current teaching status by whether the teacher was expected to leave and level of experience: 2005–06 SASS pretest and 2006–07 TFS pretest**

Data from Teacher Listing Form (TLF) Expected to leave and years of experience	Data from Teacher Follow-up Survey Pretest (TFS-1[X])			
	Teacher stayed	Teacher moved	Left teaching	Don't know
Yes				
0–3	29.3	24.8	12.7	33.1
4–19	23.8	33.7	17.4	25.0
20+	20.4	9.4	62.6	7.5
No or don't know				
0–3	76.6	8.7	5.6	9.0
4–19	87.7	6.4	2.9	3.0
20+	88.4	3.5	7.0	1.0

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Schools and Staffing Survey (SASS) Pretest, 2005–06 (previously unpublished tabulation); Teacher Follow-up Survey (TFS) Pretest, 2006–07 (previously unpublished tabulation).

### **Key Findings**

- For the most part, highly experienced teachers (20 or more years of experience) who were expected to leave the school did leave before the following school year.
- The expectation question was somewhat less effective for the less experienced teachers who were expected to leave; however, it still identified a substantial number of movers and leavers.
- Revising the categories on the TFS-1(X), including rewording the unknown category from “Left the school—no other information given” to “Left the school—occupational status unknown,” was effective in reducing the size of the unknown category.

### **FirstData Address Corrections**

Prior to the SASS pretest mailout, staff submitted sampled schools’ names and addresses to FirstData.<sup>4</sup> FirstData returned address corrections to the SASS staff and these were evaluated for quality. A complete report of the methodology and detailed findings can be found in “Appendix E. Quality of Address Corrections From FirstData for Schools in the 2005–06 SASS Pretest.”

### **Methods**

Staff submitted name and address information for the 1,100 sampled schools. FirstData returned 197 sampled school cases with address corrections. Each case with address corrections had from 2 to 10 possible corrections. Table 5 provides the frequency of the number of possible address corrections provided by FirstData for each case with address corrections. The address corrections were evaluated by looking at whether FirstData returned an address correction that was qualitatively different from the address originally submitted to them and the number of address corrections provided for each case.

<sup>4</sup> FirstData, also known as FastData, is an integrated information service that provides companies access to data records to authenticate, verify, locate, and identify individuals or businesses.

**Table 5. Frequency of the number of possible address corrections provided by FirstData: 2005–06 SASS pretest**

Number of possible address corrections	Number of sampled schools (N = 197)	Percent of sampled schools (rounded)
1	0	0
2	77	39
3	36	18
4	21	11
5	15	8
6	9	5
7	4	2
8	6	3
9	6	3
10	23	12

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Schools and Staffing Survey (SASS) Pretest, 2005–06 (previously unpublished tabulation).

Staff submitted name and address information for 50 dummy cases. The dummy cases were real schools with slightly altered addresses. The alterations usually consisted of changing the address number or street name. The majority of the altered addresses were very similar to the correct address for the school and reflected errors that could easily be a keying mistake. The dummy cases were evaluated to determine if FirstData provided a correct address for the incorrect address that was originally submitted. Even in cases where FirstData provided multiple address corrections, if at least one of the possible address corrections returned was correct, the case was counted as a correct address returned.

### **Key Findings**

- In 65 of 197 address corrections (33 percent), FirstData did not provide the same address that was originally submitted to them. However, for 132 of 197 address corrections (67 percent), FirstData returned the same address originally submitted to them for at least one of the address corrections they provided for that case.
- In 17 of the 50 dummy cases (34 percent), FirstData returned the correct address in at least one of the possible address correction fields. However, in 33 of the 50 dummy cases (66 percent) FirstData either provided no address or an incorrect address.
- As a result of the study, it was determined that FirstData was not of sufficiently high quality and therefore would not be used to correct addresses for SASS.

## **Research on Collection of Teacher Compensation Data**

SASS collects annual salary data from teachers in the Teacher Questionnaire and the Private School Teacher Questionnaire. In an effort to verify and expand the data collected on teacher compensation, NCES and the U.S. Census Bureau explored collecting more specific information about teachers' salaries and benefits through their school districts.

### **Focus Groups**

The U.S. Census Bureau contracted with ORC Macro to conduct three focus groups to determine whether districts had policies regarding the release of this information, what types of information they would be

able to provide, and what information teachers would be willing to have released through the survey. All focus groups were conducted by telephone to allow for inclusion of participants from different geographical regions. A complete report of the methodology and detailed findings can be found in “Appendix F. Focus Group Findings and Recommendations: Collection of Teacher Compensation Data Through SASS.”

### ***Focus Group One—District Personnel***

The first focus group was conducted to determine whether districts had policies regarding the release of information on teacher salaries and benefits. The participants were district personnel recruited by telephone who responded “yes” to the screening question, “If the Census Bureau were to request information from your district about the salaries and benefits of specific teachers, are you the person in your district who would decide what salary and benefit information could be provided?”

#### ***Methods***

Eight district staff members, including one superintendent, one assistant superintendent, an administrative assistant from a superintendent’s office, an operations director, and several people who worked in payroll offices participated in the focus group. The session consisted of an introduction (5 minutes), request for information letter (15 minutes), policies regarding sharing of teacher compensation data (20 minutes), completion of the salary and benefit information form (5 minutes), general steps for teacher dismissals (5 minutes), and a false close (10 minutes), during which the focus group moderator speaks with the observers from the U.S. Census Bureau and NCES to discuss additional follow-up questions.

#### ***Key Findings***

- Respondents said that if they received the request for teacher compensation data, they would want to know why the information was needed and what would be done with it. If this were clear, they would be more likely to complete the survey.
- Over half of the participants indicated that since teachers are public employees, their salaries and benefits are public information in their state. Most of the participants who indicated that teacher salaries were public information said that they would be willing to provide this information if asked. However, a few said that although salary steps are public information, the salaries of individual teachers are not.
- Three of the participants said that teacher consent was not necessary since teacher compensation information is public. One said that she would want to know that the teachers were informed that this information was being requested, and four said that they would contact the teachers to verify that they had given permission.
- The general process for teacher dismissal was similar in all districts. Teachers who receive less-than-satisfactory evaluations are put into a mentoring or peer assistance program, which lasts either 1 or 2 years. If the teachers’ evaluations do not improve, districts can make a recommendation to their Board of Education that the teacher be dismissed. Non-tenured teachers are usually not given as long of a period of time to improve. In most cases, teachers who are going to be dismissed choose to resign or retire early.

### ***Focus Group Two—District Personnel***

The second focus group was conducted to determine what type of information districts would be able to provide regarding teachers’ salaries and benefits. The participants were district personnel recruited by telephone who responded “yes” to the screening question, “If specific information about the salary and

benefits of an individual teacher were needed, are you the person in your district who has the best knowledge of what information would be available and how that information could be found?"

### ***Methods***

Ten district staff members, including one superintendent, two directors of human resources, one director of a payroll department, and several people who worked in the business or payroll offices of their district participated in the focus group. The session consisted of an introduction (5 minutes), questions for discussion, including the total cost to employ a teacher, the components of the cost, who would be able to provide the information, and the approximate time for completion of a form that requests the information (45 minutes), and a false close (10 minutes).

### ***Key Findings***

- District personnel were concerned with the amount of time it may take to complete the survey, and thought that October was the best time of year.
- Interpretations of a teacher's "base salary" varied, with some district personnel interpreting it as excluding additional stipends for advanced degrees or teacher experience. "Contractual salary" was suggested; however, some participants thought that this would include activities such as coaching.
- About two-thirds of the participants said that their records break down the cost of worker's compensation insurance by teacher; the remainder indicated that their district pays this insurance in an aggregate amount and that additional calculations would be required to respond to the item for an individual teacher.
- District personnel thought it would be easy to provide the number of vacation, sick, and personal leave days for an individual teacher; however, the categorization systems in place for these leave days varied by district.
- District personnel had various interpretations regarding paid holidays. In general, most said that teachers are paid for a certain number of days worked, and those days worked do not include holidays.
- District personnel indicated that they would be able to provide the district and teacher components of the costs of life, health, and long- and short-term disability insurance, as well as pension/retirement plans, when the teacher's contribution was a required amount. In general, in districts where teachers were given a choice as to what level of insurance to buy or what amount to contribute for retirement, district personnel said that they would be reluctant to provide data on teacher contributions due to privacy concerns.
- District personnel said that information on Social Security and Medicare could easily be provided.
- District personnel indicated that it would be easy to provide the district's cost for state and federal unemployment insurance; however, in some districts, these costs are paid solely by the state.
- District personnel in at least one state mentioned that their district and/or state does not participate in the federal Unemployment Insurance program; that is, if any teachers are laid off, then the unemployment payments are paid directly by the district.

### ***Focus Group Three—Teachers***

The third focus group was conducted with teachers who responded to a recruitment e-mail to determine what information they would be willing to have released through the survey.

#### ***Methods***

Eleven elementary, middle, and high school teachers from nine different states participated in the focus group. Their years of teaching experience ranged from 2 to 30 years. The session consisted of an introduction (5 minutes), requested salary information from the district (20 minutes), benefit information (25 minutes), and a false close (10 minutes).

#### ***Key Findings***

- Almost all of the teachers were comfortable with their district being asked about their salary or benefits. Most teachers said that they would want to be notified in advance as a matter of courtesy, but others felt that this wasn't necessary since teacher compensation information is public. None indicated that active consent, such as the teacher's signature, would be necessary.

Teachers were very interested in how the information would be used. Several were eager to provide the compensation information because they believed that public awareness of this data would lead to increased teacher salaries.

- Teachers felt that “base salary” was fairly clear, but thought that “salary as per salary schedule” or “base salary on the salary schedule” would be clearer.
- Teachers brainstormed various responsibilities for which teachers may receive extra pay. These included acting as a department chair, coaching, tutoring, acting as a faculty advisor for clubs, teaching after-school programs, etc.
- Teachers did not object to their districts releasing information about pay that they receive for additional responsibilities; however, they felt that it was important for this pay to be connected to an accurate measure of how much time they spend on these activities.
- Teachers were uncomfortable with their districts releasing information about them that indicated the choices that they made regarding insurance and retirement plans.

### **Data Collection Studies**

#### ***ORC Macro Data Collection Study***

The U.S. Census Bureau and the NCES contracted with ORC Macro to conduct a data collection study with school district personnel. This project had two primary goals:

- to learn more about what information school districts would be willing to provide on teacher salaries and benefits, and what concerns they would have about providing this information; and
- to get a better understanding of the formats in which districts could most easily produce these data.

A complete report of the methodology and detailed findings can be found in “Appendix G. Results of School District Data Collection Study: Potential for Collecting Teacher Salary and Benefit Data.”

## **Methods**

ORC Macro was given a file of 153 school districts, with one or more schools listed for each district and with teachers for each of the schools. The sample of districts was divided into three groups that were asked to provide a different set of data. Group A was given a detailed list of salary and benefit categories and asked to provide data for all full-time teachers in their district. Group B was given the same list of salary and benefit categories, but was only asked to provide data for a subset of randomly selected teachers. Group C was asked to provide the average and median salaries of teachers at one or more randomly selected schools as well as in the district as a whole. In addition, they were asked to disaggregate these figures by years of experience, gender, and school level.

A trained data collector contacted each district by phone, determined the appropriate respondent, described the study, and attempted to recruit the district for participation. The appropriate data collection instrument was e-mailed to district personnel who agreed to participate. The district personnel were told that they could provide the data in any format they preferred, as long as the data were complete. If the district refused to participate, the data collector recorded the reason for the refusal and ceased contact. If the appropriate respondent could not be reached, the data collector left a message and continued to try to reach the respondent.

The data collector followed up with the district personnel who agreed to participate to remind them to return the data and to answer any questions the respondent may have. Once data were received, it was reviewed for completeness and internal consistency. The data collector called respondents to ask follow-up questions.

Table 6 summarizes the final outcomes of the recruiting calls for the School District Data Collection Study.

**Table 6. Outcomes of recruiting calls for the District Data Collection Study**

Outcomes	Total	Group A	Group B	Group C
Total	153	51	51	51
Agreed to participate	39	14	9	16
Submitted data	21	7	7	7
Did not submit data	18	7	2	9
Declined to participate	35	13	9	13
Did not have time to collect and submit data	19	7	2	10
Privacy concerns	11	4	6	1
No reason given	5	2	1	2
Permission needed from supervisor (no further response)	10	4	4	2
No direct contact with district representative	63	18	26	19
Disconnected/No answer	6	2	3	1

NOTE: Detail may not sum to totals because of rounding.

SOURCE: *Results of School District Data Collection Study: Potential for Collecting Teacher Salary and Benefit Data*, ORC Macro, May 25, 2006.

## **Key Findings**

- The format in which participants returned information corresponded with the group they were in; whereas the method by which they returned the data did not. Group A usually submitted printouts

that seemed to be from the district's databases; group B either created spreadsheets or printed a copy of the data collection instrument for each of the sampled teachers and filled it in by hand; group C usually typed salary figures into the provided template. Approximately half of the participants in each group chose to return their data as an e-mail attachment, while the other half chose to fax their response.

- District personnel who were asked to provide data about all of their teachers did so in four of the seven cases. Two of the respondents did not provide any data on individuals, and one did not provide benefit data on individuals. Two of these districts cited the amount of effort required as their reason for not providing it, while the other cited privacy concerns.
- Most districts that were asked for teachers' background data (i.e., full-time status, gender, years of experience, grade level) were able to provide it. Almost all of the participants who were asked to provide teachers' base salaries and additional pay for additional activities did so.
- Most participants in group B provided health, life, and dental insurance costs for individual teachers, while only three of seven in group A provided this information.
- Most districts provided dollar amounts for worker's compensation insurance, Social Security payments, and defined-benefit retirement plans; however, some districts provided percentages of teachers' salaries.
- Nearly all districts divided leave for teachers into two categories: personal and sick leave. There was confusion regarding what to consider annual leave. Very few districts provided teachers with paid holidays, and none offered paid family leave.

### ***Teacher Compensation Pilot Study***

The U.S. Census Bureau conducted the Teacher Compensation Pilot Study (TCPS) following the SASS pretest. This study had three main objectives:

- to check the validity of teacher-reported salary data against district-reported salary data;
- to determine whether it was possible to get district-reported salaries for teachers who did not report their salaries on the SASS Teacher Questionnaires; and
- to test the ability to collect detailed teacher salary and benefit information from school district offices.

A complete report of the methodology and detailed findings can be found in "Appendix H. Summary of the 2005–06 SASS Teacher Compensation Pilot Study." An analysis of the feasibility of collecting teacher compensation and benefits data from administrative records and of the validity of self-reported teacher salary data can be found in "Appendix I. Using Administrative Record Data to Assess Self-Reported Wage Items in SASS: The Teacher Compensation Pilot Study, 2006."

### ***Methods***

A sample of 300 school districts was selected from the SASS pretest sample. Sampled districts were assigned to one of six treatment panels that varied on the level of data the district was asked to provide (salary only, salary and limited benefits, and salary and extensive benefits) and whether the teachers were given an opportunity to opt-out of the survey.

The U.S. Census Bureau's telephone center staff called each sampled district to provide information regarding the TCPS, verify the district's mailing address, and identify the most appropriate respondent for the TCPS questionnaire. Questionnaires were mailed to the appropriate respondent with an introductory letter that included the purpose and content of the survey, a statement of authority, and an assurance of confidentiality. The introductory letters were tailored to each group's treatment panel conditions. A

follow-up mailing was sent to nonresponding districts two weeks after the initial mailing. Telephone center staff contacted districts that did not return their questionnaire in an attempt to collect the data over the telephone.

Table 7 summarizes the item response rates by the level of salary and benefit data that was requested from the district and whether the teachers were able to opt-out.

**Table 7. Summary of item response rates by treatment panel: 2005–06 TCPS**

Teacher Compensation Pilot Study (TCPS) treatment panel	Range of item response rates	Percent of items with a response rate of 85.0 percent or more	Percent of items with a response rate of 70.0–84.9 percent	Percent of items with a response rate of less than 70.0 percent
Salary only	81.87–97.22	91.67	8.33	0
No teacher opt-outs	82.50–96.99	91.67	8.33	0
Teacher opt-outs	81.32–97.44	91.67	8.33	0
Salary and limited benefits	62.02–98.06	52.17	43.48	4.35
No teacher opt-outs	58.75–97.50	52.17	43.48	4.35
Teacher opt-outs	67.35–98.98	60.87	34.78	4.35
Salary and extensive benefits	69.01–98.59	81.82	15.15	3.03
No teacher opt-outs	75.00–99.08	84.85	15.15	0
Teacher opt-outs	54.81–99.04	78.79	15.15	6.06
All treatment panels	65.18–98.12	78.79	18.18	3.03

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2005–06 SASS Teacher Compensation and Pilot Study, “SASS-101, 102, and 103 Data Files.”

## **Research on Teacher Evaluation and Dismissal**

### **Focus Group**

The U.S. Census Bureau contracted with ORC Macro to conduct a focus group to research principals' attitudes toward teacher evaluation and dismissal in order to develop new items for the Principal Questionnaire, a component of the Schools and Staffing Survey. A complete report of the methodology and detailed findings can be found in “Appendix J. Focus Group Findings and Recommendations: Principals’ Attitudes Toward Teacher Evaluation and Dismissal.”

### **Methods**

Twelve principals, including five elementary school principals, three intermediate school principals, and four high school principals, from nine states participated in the focus group. The session consisted of an introduction (5 minutes), teacher performance measures (15 minutes), definition of tenure (5 minutes), school system procedures for dealing with underperforming teachers (30 minutes), perceptions of ease of teacher dismissals (5 minutes), verification of past graduates (5 minutes), and a false close (10 minutes), during which the focus group moderator speaks with the observers from the U.S. Census Bureau and NCES to discuss additional follow-up questions.

Prior to the focus group meeting, principals were asked to complete a brief questionnaire. This questionnaire asked principals for the approximate percentage of their tenured and non-tenured teachers

who they would classify as outstanding, effective, satisfactory, and underperforming based on teaching ability. The results are provided in table 8 below. Principals were then asked what percentage of the satisfactory teachers has the capacity to improve to become an effective or outstanding teacher, in their opinion. They were also asked what percentage of the underperforming teachers has the capacity to improve to become an effective or outstanding teacher, in their opinion.

**Table 8. Percentage of tenured and untenured teachers that principals' rated as outstanding, effective, satisfactory, and unsatisfactory**

Type of teacher	Mean response	Median response	Range of responses	
			Lowest	Highest
<b>Tenured teachers (<i>n</i> = 13)</b>				
Outstanding	27	20	5	75
Effective	49	50	20	90
Satisfactory	20	15	0	50
Unsatisfactory	5	5	0	10
<b>Untenured teachers (<i>n</i> = 9)</b>				
Outstanding	23	10	0	75
Effective	44	50	0	85
Satisfactory	20	15	0	50
Unsatisfactory	14	2	0	100

SOURCE: *Focus Group Findings and Recommendations: Principals' Attitudes toward Teacher Evaluation and Dismissal*, ORC Macro, April 12, 2006.

### **Key Findings**

- Principals evaluated teachers using three main sources of information: structured teacher observations in classrooms, student test scores, and feedback from department heads, students, parents, and past graduates.
- Characteristics of unsatisfactory teachers included being unwilling to learn or work hard, poor relationships with students (e.g., an inability to connect with or motivate students), poor relationships with the school faculty, disorganization, and a lack of following state instructional standards.
- Most participants felt that non-tenured teachers were more likely to improve than their tenured counterparts. There was limited variation in the tenure system between states regarding the level of experience required to become a tenured teacher and the terminology used to distinguish tenured teachers from non-tenured teachers.
- Participants reported that when teachers received unsatisfactory evaluations, they were put on a remediation plan during which they were monitored closely and received extra support and training. If the teacher's evaluations did not improve, they could be recommended to the Superintendent and/or Board of Education for dismissal.
- Common barriers to teacher dismissal were the requirement that principals' evaluations of teachers be solely based on observations of in-class performance using standard instruments, teachers knowing how to manipulate the system by improving their performance just enough to avoid dismissal, and fear of harming morale in the school.
- Participants suggested asking how many teachers who left their school had been on a teacher improvement plan within the last three years, or asking how many teachers had left the school in the past year and how many of these teachers the principal would rehire if given a chance.

## Cognitive Interviews

The U.S. Census Bureau contracted with ORC Macro to conduct a series of cognitive interviews with elementary, middle/junior high, and high school principals to gather feedback on proposed items for the Schools and Staffing Survey. A complete report of the methodology and detailed findings can be found in “Appendix K. Summary of Findings and Recommendations: Telephone Interviews With Principals.”

### Methods

Eighteen principals, including eight elementary school principals, five middle or junior high school principals, and five high school principals, from 15 states participated in the focus group. Four participants had 3 to 5 years of experience as a principal, two had 6 to 10 years of experience, and ten had over 10 years of experience. Principals were recruited by e-mail and screened to ensure that a range of school levels and geographic regions were represented. The interviews took approximately 60 minutes and each principal received a \$100 stipend for participating.

The interviews were conducted using a “think-aloud” protocol. Participants were asked to answer the proposed SASS questions as they normally would, but describe what they were thinking as they read the item, considered the answer options, and selected a response. The interviewer probed and asked follow-up questions as necessary. Principals were asked questions that related to the following topics: teacher transfers and dismissals, Adequate Yearly Progress (AYP) and state accountability frameworks, and the make-up of an average student’s school day. The high school principals were not asked about the make-up of an average student’s school day as this question is only intended for elementary and middle/junior high schools.

### Key Findings

- Throughout the questions on teacher transfers and dismissals, some principals did not consistently follow directions on when to include or not include tenured and non-tenured teachers. In some items, principals were unclear on how to classify teachers who had retired.
- Most principals were able to separate their teachers into two experience categories, although not all principals used the tenured and non-tenured terminology.
- Most principals thought that the categories of “outstanding,” “above average,” “average,” and “unsatisfactory” for teacher performance were clear and appropriate.
- Most principals understood the definition of “formal teacher improvement plan.” However, in some districts, all teachers have professional development plans.
- Most principals were unwilling to put in writing that they use informal means of encouraging teachers to transfer, retire, or resign.
- Principals did not think that they could provide accurate counts of students who transferred to or from the school due to whether the school or the student’s previous school had made AYP.
- There was some confusion over what constituted “supplemental services” and how they related to the school’s AYP status. Some schools offered supplemental services prior to the AYP system and others answered the questions about supplemental services even though they made AYP.
- For the most part, elementary and middle/junior high school principals were able to answer questions about the makeup of an average student’s school day. Some confusion arose over classes that students attended for part of the school year and what to qualify as a foreign language or elective class.

## Teacher Questionnaire Item Development

The National Center for Education Statistics (NCES) contracted with Child Trends to conduct a series of cognitive interviews to evaluate the question wording, layout, and design of three sections of the Teacher Questionnaire—Class Organization, Certification, and Working Conditions—in the 2003–04 Schools and Staffing Survey (SASS). A brief description of this research is presented below. The report on this analysis is presented in “Appendix L. Teacher Questionnaire Item Development for the 2007–08 SASS.”

### Methods

Four rounds of cognitive interviews with a total of 36 teachers from 14 states and with a variety of characteristics were conducted. The interviews took place between June and December of 2005. States were selected on the basis of the size of their teacher populations, their certification regulations, and regional representation. Key teacher characteristics targeted in the sample design included sector (public or private), school level (elementary, middle, and high school), subjects taught, and classroom organization. The rounds of interviews were iterative in nature such that later rounds were informed by and addressed problems found in earlier rounds.

Three methods were used to identify and recruit teachers into the study. In Round 1, teachers were identified by a marketing firm specializing in focus group and study recruitment. The marketing firm acquired, from a sampling vendor, sample lists of households known to contain a teacher in each of the four states included in the round. The marketing firm called the households on the lists and attempted to recruit eligible teachers into the study. Across the lists for the four states, a total of 409 numbers were dialed to identify and recruit the nine participants interviewed in Round 1. This was a significantly higher number of phone calls than expected for such a yield.

Given the cost of this approach, two alternative recruitment strategies were adopted for the remainder of the study. The first included the use of Craigslist.com—a popular national website that hosts state and local community message boards. In Rounds 2 to 4, advertisements were placed in the “Volunteer” and “Jobs” sections on the various city message boards for the states included in each round. The second approach included the use of informal contacts. Project staff e-mailed contacts describing the study and the characteristics of teachers needed. In total, three participants were recruited in this manner; all other participants in Rounds 2 to 4 were recruited through Craigslist.com.

Across each of the recruitment methods, screener interviews were used to establish study eligibility (e.g., full-time or part-time kindergarten through 12<sup>th</sup> grade teachers), to ensure that teachers with characteristics of interest (e.g., special education) were included, and to monitor the distribution of teacher characteristics during the recruitment process and throughout the study. Once participants were recruited and an interview was scheduled, a packet including a mock instrument, cover letter, and consent form was sent to each respondent. To facilitate participation, all participants received a reminder call the day prior to the interview and a monetary incentive upon completion of the interview (the incentive was \$50 in Round 1 and \$100 in subsequent rounds). In addition, a toll-free number was established so that interested teachers could contact the study center to determine eligibility.

### Key Findings

The results from all of the rounds of interviews suggest that the revisions tested in this study have addressed many of the issues noted above, and have resolved problems uncovered in the cognitive interviews. The main findings across the three sections include the following:

- Across the four rounds of interviews, a relatively high level of skimming and scanning was observed among respondents. For example, during probing it often became apparent that respondents did not read questions in their entirety or bypassed some or all of the instructions. To combat these behaviors, several steps were taken including increasing consistency in wording, formatting, and navigational instructions.
- Some problems were observed with taxonomies used in the 2003–04 SASS administration, in particular, among teachers whose class organizations or certificate types corresponded with one of the less common categories. The taxonomies in the class organization and certification items were revised to reduce ambiguities in definitions, minimize overlap across categories, and facilitate the response formation process.
- While this study suggested that most items were well understood and interpreted as intended, responses to probes also indicated varying degrees of problems with comprehension, clarity, and information processing. Accordingly, some items were reworded in order to increase their clarity and to improve the reliability and accuracy. In general, these revisions employed one or more of the following strategies: (1) a shift in focus to a clear and familiar reference point in order to facilitate response formation (e.g., base pay hours in the Working Conditions section); (2) explicitly stating the task and/or issue; (3) folding bulleted instructions from underneath questions into the body of the question to increase the likelihood the instruction would be attended to; and (4) reorganizing the wording structure of items to increase consistency within and across sections.
- Across the three sections, some navigational problems were detected. Increasing consistency in the format and design of visual and written skip instructions have likely increased the prominence of key instructions and facilitated the navigational flow of the instrument for respondents.
- Responses to probes indicated that in at least two instances, the questions were inconsistent with NCES goals. Revisions to items in the Working Conditions section and the class organization item have increased the likelihood that the targeted information is elicited.
- Data collected from this study offer important lessons about the appropriateness of using examples and labels.
  - First, the study provides evidence that using examples in response options impedes the response formation process and in many instances does not serve its intended purpose of illustrating instances or cases of the underlying construct. The results of this study suggest that respondents hone in on the examples and pay less attention to the underlying construct described in the response options. Thus, whenever possible, the use of examples in response options should be avoided.
  - Second, the results of the study also suggest that the use of labels and key terms should be approached with caution. In some instances, the labels facilitated scanning and skimming behavior. In other cases, respondents had difficulty moving away from options that contained familiar and salient labels (or examples). Given the variation in terminology used across states or sectors as well as changes over time, it may be prudent to minimize the use of labels to instances in which they appear to have fairly universal meaning and a high level of familiarity.

## Chapter 4. SASS Frame Creation and Sample Selection Procedures

This chapter discusses how the sampling frame was created and how cases were sampled for the 2007–08 Schools and Staffing Survey (SASS). The first major section discusses the creation of the frame for public and Bureau of Indian Education (BIE)-funded schools, including schools deleted, added, and otherwise edited. Next, the public and BIE-funded school sampling procedure is described. This is followed by a description of the district sampling, which is simply a by-product of the school sampling. The next major section covers the private school frame creation and sampling. The final major section discusses teacher sampling.

### Public and BIE-Funded School Sampling Frame and Sample Selection

#### Public and BIE Frame Creation

The foundation for the 2007–08 SASS public and BIE-funding school frame was the 2005–06 Common Core of Data (CCD) file. CCD is based on survey data collected annually by the National Center for Education Statistics (NCES) from each state education agency. For the 2005–06 school year, state education agencies used their administrative record data to report information for 102,952 schools. NCES and the state education agencies worked cooperatively to ensure comparability between the elements reported. CCD is believed to be the most complete public school listing available. The frame includes regular and nonregular schools (special education, alternative, vocational, or technical), public charter schools, and BIE-funded schools.

Due to an accelerated survey schedule, the preliminary 2005–06 CCD file was used as the basis for the SASS sampling frame rather than the final version. When the final CCD file became available, the two files were compared and any major updates were added to the frame. A number of updates were made, primarily to locale and other geocodes.

In SASS, a school was defined as an institution or part of an institution that provides classroom instruction to students; has one or more teachers to provide instruction; serves students in one or more of grades 1–12 or the ungraded equivalent; and is located in one or more buildings. It was possible for two or more schools to share the same building. If these schools had different administrations (i.e., principals), then they were treated as different schools.

The SASS definition of a school was generally similar to CCD with some exceptions. CCD included some schools that did not offer teacher-provided classroom instruction in grades 1–12 or the equivalent ungraded levels. In some instances, schools in CCD were essentially administrative units that may have overseen entities that provided classroom instruction or the school on CCD may have provided funding and oversight only. SASS collapsed CCD schools where the location address and phone number were the same on the assumption that the respondent would consider this to be all one school. (Further discussion of this issue is provided later in this Public and BIE Frame Creation section under “School Collapsing.”) CCD required only that schools have an assigned administrator, but since SASS allowed schools to define themselves, Census Bureau staff observed that schools generally reported as one entity in situations where the administration of two or more schools on CCD was the same. SASS was confined to the 50 states plus the District of Columbia and excluded territories and overseas schools.

To illustrate, some examples of the differences between SASS and CCD are presented below:

- In California, CCD listed the Special Education program at each County Office of Education as a school, whereas SASS tried to determine which special education programs were operated by each office.
- Homebound school programs (i.e., students confined to home due to a long-term illness or condition) that are publicly-supported were included in CCD but not SASS.
- Schools overseas that are operated by the Department of Defense (DoD) were included in CCD but not in SASS.
- Multiple CCD schools at the same address and with the same phone number were considered one school in SASS.
- Multiple CCD schools each with a unique administrator who reports to the high school principal were considered one school in SASS if the respondent said the school covered multiple CCD grade ranges.

### ***Frame Deletions***

Since CCD and SASS differ in scope and their definition of a school, some records were deleted, added, or modified in order to provide better coverage and a more efficient sample design for SASS. The following types of school records were deleted from CCD during the creation of the SASS sampling frame:

- There were 1,917 schools that were closed as of the 2005–06 school year and deleted from the frame. These schools were identified by the status code found on the CCD file. They are carried on the CCD for 1 additional year for completeness but are clearly designated as not operating.
- There were 1,829 schools located outside the 50 states and the District of Columbia that were deleted. These schools were identified as having a FIPS state code of 58 (overseas DoD), 60 (American Samoa), 66 (Guam), 69 (Northern Marianas), 72 (Puerto Rico), or 78 (U.S. Virgin Islands). Note that BIE-funded schools (FIPS state code = 59) and domestic DoD schools located within a state (FIPS state code = 61) were not deleted from CCD because they are eligible for SASS.
- There were 469 Homebound, Adult, or nonschool entities that were deleted. These schools and programs were clerically identified from a list of schools from the CCD that had “HOMEBOUND,” “TARGETED SERVICES,” “PSYCHOANALYTIC,” or “ADULT” in the name. Since they did not provide classroom instruction to K–12 students, they were not eligible for SASS.
- Eleven BIE-funded dormitories that were listed on CCD as schools were deleted. These schools were identified by searching for BIE-funded schools that included “DORM” or “RESIDENCE” in the name. The dormitories exist in support of BIE-funded or traditional public schools but do not actually provide instruction.
- Twenty-four traditional public schools that were also listed as BIE schools were deleted. These schools were identified by comparing the BIE-funded schools to public schools in the same counties. Since they were duplicated between the BIE-funded list and the state-funded list, the public school record was deleted to ensure the case would have only one chance of selection.
- There were 308 schools reported as closed or not providing classroom instruction that were deleted when contacted for other reasons, such as to obtain a missing grade range.
- There were 109 school records that were deleted, which were actually administrative units in Arizona, California, Connecticut, the District of Columbia, New York, and Pennsylvania. Schools operated by these administrative units were subsequently added as described in a later section on frame additions. These records were clerically identified based on previous experience.

Pennsylvania records that had the term “Penn Department of Data Services” in the school name were deleted. California records were deleted if they had “County Office of Education” as part of the district name or “Special Education,” “Juvenile,” “Community,” “Alternative,” or “Opportunity” as part of the school name and were associated with a county office of education on the district data file. New York records were deleted if the school name contained “BOCES” (Boards of Cooperative Educational Services). Records in Arizona, Connecticut, and the District of Columbia were identified for deletion if they did not have “SCH”, “SCHOOL,” “ACADEMY,” or some other clear indication in the name that the record was describing one school.

- These records were deleted from the school file, because they were not schools but were offices that oversaw certain types of education within the county. This type of education is often provided at a number of locations within a particular county, but not necessarily at schools listed on CCD. To avoid confusion, these records were taken off the school file, contacted by phone, and requested to provide a list of the schools they oversaw. These lists were subsequently matched to CCD. If any of the schools from these lists were not already on CCD, they were added at that time.
- There were 1,619 schools that offered kindergarten or less as the highest grade that were deleted. These schools were identified using the school’s highest grade offered as provided on CCD.

### **School Collapsing**

Some 2,737 school records were “collapsed” into other school records at the building level and deleted. Past data collections have shown that there are sampled schools that report survey data for the entire building when there is one head principal instead of reporting only for the part of the school that has been sampled. This issue occurs most often in certain states, in rural areas, or in schools that offer grades K–12 in the same building with one head principal. The problem lies in the conflicting definition of a school as held by the schools themselves and as reported by states to CCD. The schools often consider themselves one cohesive unit while the state does not. For accounting or other administrative purposes, the states artificially split these schools by grade level and report them as two or three separate schools.

If a CCD school within the associated school districts is selected for SASS, then the school often reports for all of grades K–12. This caused substantial overreporting in SASS reports of state aggregates, such as enrollment and teacher counts, because these schools were sampled based on the particular grade range as reported on CCD but these schools then responded based on a much broader grade range (matching how they perceived themselves). In other words, these schools had unrecognized multiple chances of selection for sampling. The unrecognized chances of selection refer to the fact that regardless of which CCD record in the building was selected, the school was likely to report for the whole building. Thus, the entity that reports could be selected via multiple CCD records. In the past, SASS data were edited after the field data collection to conform to the CCD grade range. This method was costly and time-consuming. Furthermore, many school respondents have reported they do not keep records at the school level as reported on CCD, making it difficult for them to respond to SASS in this manner. For this reason, it was decided for the 2003–04 SASS and again for the 2007–08 SASS to collapse the CCD records whenever it was believed that this problem was likely to occur.

Census and NCES jointly determined a set of rules for school collapsing to apply during frame creation. In order to make the sampling frame more consistent with the school’s actual grade range, these potential problem schools were identified and collapsed to the appropriate building level. When the school records were collapsed together, the student and teacher counts, grade range, and name as reported to CCD were all modified to reflect the change. The complete set of collapsing rules and the results of the procedure are presented in “Appendix M. Results of Using a Physical Locations Definitions for Schools in the 2007–08 SASS.”

### **Frame Additions**

The following types of school records were added to the original CCD while creating the SASS sampling frame:

- Twenty-six records that were listed on CCD as districts with no associated school records were determined to be newly-opened schools, based on the name (e.g., included “school” or “academy”), teacher, and enrollment counts, and were added.
- A total of 292 school records, primarily alternative, special education, and juvenile justice facilities, identified by contacting the deleted county or regional administrative units in Pennsylvania (114 schools), California (113 schools), New York (56 schools), as well as three other states (9 schools total in Arizona, Connecticut, and the District of Columbia), were also added.
- There were 191 Career Technical Centers (CTCs) that were added to the sampling frame. These schools were obtained from a list provided by NCES. This list was clerically unduplicated with CCD. The CTCs were believed to be underrepresented in CCD, so a supplementary list was obtained from state directors of such centers. Centers that appeared to serve primarily postsecondary students were not added because they were not eligible for SASS.

After the adding, deleting, and collapsing of school records, the SASS school sampling frame consisted of 90,410 traditional public, 3,849 public charter, and 178 BIE-funded schools. From this point on, this is considered the 2007–08 SASS sampling frame. Table 9 shows the totals by state during each step in the frame creation process.

**Table 9. Total number of public and BIE-funded school records during each step in the frame creation process, by school type and state: 2007–08**

School type and state	Preliminary 2005–06 CCD <sup>1</sup> file	After deletions (ineligible & duplicate school records)	After additions (CTC <sup>2</sup> & nonregular schools in certain states)	Final public school universe (after collapsing procedure)
Total	102,952	96,665	97,174	94,437
BIE-funded <sup>3</sup> schools	189	178	178	178
Domestic DoD <sup>4</sup> schools	69	60	60	60
Charter schools (included in state totals below)	4,105	3,849	3,849	3,849
Alabama	1,606	1,580	1,580	1,575
Alaska	525	514	514	511
Arizona	2,147	2,033	2,038	2,038
Arkansas	1,174	1,125	1,129	980
California	9,973	9,754	9,900	9,856
Colorado	1,730	1,669	1,669	1,582
Connecticut	1,120	1,078	1,080	1,073
Delaware	235	226	227	226
District of Columbia	231	218	222	222
Florida	4,313	3,623	3,626	3,607
Georgia	2,513	2,418	2,418	2,406
Hawaii	285	285	285	284
Idaho	731	711	711	702
Illinois	4,529	4,268	4,272	4,141
Indiana	2,026	1,957	1,963	1,943

See notes at end of table.

**Table 9. Total number of public and BIE-funded school records during each step in the frame creation process, by school type and state: 2007–08—Continued**

School type and state	Preliminary 2005–06 CCD <sup>1</sup> file	After deletions (ineligible & duplicate school records)	After additions (CTC <sup>2</sup> & nonregular schools in certain states)	Final public school universe (after collapsing procedure)
Iowa	1,566	1,489	1,489	1,319
Kansas	1,414	1,395	1,401	1,356
Kentucky	1,475	1,393	1,449	1,428
Louisiana	1,562	1,499	1,502	1,500
Maine	687	672	673	668
Maryland	1,446	1,416	1,417	1,413
Massachusetts	1,908	1,810	1,811	1,803
Michigan	4,175	3,917	3,932	3,872
Minnesota	2,770	2,398	2,398	2,295
Mississippi	1,056	1,046	1,046	1,045
Missouri	2,374	2,306	2,306	2,002
Montana	863	846	846	568
Nebraska	1,288	1,197	1,197	1,041
Nevada	577	552	552	546
New Hampshire	488	472	482	460
New Jersey	2,581	2,493	2,493	2,493
New Mexico	885	817	817	769
New York	4,782	4,615	4,672	4,672
North Carolina	2,351	2,344	2,344	2,342
North Dakota	551	518	519	407
Ohio	4,299	4,020	4,020	3,935
Oklahoma	1,800	1,769	1,818	1,511
Oregon	1,262	1,258	1,259	1,248
Pennsylvania	3,289	3,226	3,340	3,340
Rhode Island	346	331	331	329
South Carolina	1,187	1,159	1,161	1,157
South Dakota	731	715	715	479
Tennessee	1,726	1,671	1,673	1,669
Texas	8,999	8,665	8,670	8,670
Utah	1,009	988	993	967
Vermont	396	352	356	350
Virginia	2,109	2,043	2,043	2,042
Washington	2,298	2,206	2,206	2,175
West Virginia	805	791	792	786
Wisconsin	2,297	2,200	2,200	2,049
Wyoming	384	379	379	347
American Samoa, Guam, Northern Marianas, Puerto Rico, U.S. Virgin Islands	1,820	0	0	0

<sup>1</sup> CCD refers to the Common Core of Data.<sup>2</sup> CTC refers to Career Technical Center.<sup>3</sup> BIE refers to the Bureau of Indian Education.<sup>4</sup> DoD refers to the U.S. Department of Defense.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Frame Data File” before, during, and after frame creation activities, 2007–08.

### **Frame Corrections**

As mentioned above, the preliminary version of the 2005–06 CCD file was used as the basis for the 2007–08 SASS sampling frame. Using this file required the correction of variables necessary for sampling or conducting the survey, such as grade range, enrollment, teacher count, enrollment by race, school county code, school name, address information, and phone number. The following section outlines the steps taken to correct those variables.

If the school's grade range was missing from the CCD file, three methods were used to resolve the issue:

- taking data from earlier CCD files or SASS data;
- assigning a generic grade range based on the school's name (i.e., "Elementary" schools were assigned grades K–6, "Middle" schools were assigned grades 6–8, and "High" schools were assigned grades 9–12); or
- calling the school for clarification. NOTE: During this calling process a few schools were discovered to be closed or otherwise out-of-scope and were deleted from the sampling frame, as described in the prior Frame Deletions section.

The student and teacher counts were imputed for schools missing this information by applying one of the methods listed below in the following hierarchical order:

- pulling information from previous CCD data for that school;
- extrapolating from current CCD student-teacher ratios and averages for the state; or
- using data that were collected in the 2003–04 SASS for that particular school.

NOTE: Teacher counts were not included for BIE-funded schools in the 2005–06 CCD because the Bureau of Indian Education did not collect these counts.

School-level counts of student enrollment and the counts of students by race/ethnicity were used to identify the schools in which American Indian or Alaska Native students composed at least 19.5 percent of the enrollment. These schools were sampled at a different rate than other public schools, so they needed to be identified during the creation of the SASS frame. These schools were identified using one of the following methods:

- examining the current CCD enrollment by race/ethnicity, if present;
- examining previous CCD enrollment by race/ethnicity; or
- reviewing the characteristics of the surrounding schools. If most of the surrounding schools in the county were flagged as having a high American Indian or Alaska Native enrollment, the school in question was also flagged.

The school's grade range was edited so as to drop grades that had no enrollment or less than three students in a given grade. This procedure was not applied to schools with less than 50 students. Correction of the grade range was important for stratification.

In instances where the school name implied considerably fewer grades than it actually offered, the name was modified to eliminate inappropriate descriptions. These schools were identified by comparing the school's name to the grades currently offered. If the name differed considerably from the grade range (e.g., the name contained "High School," but the grades offered were K–12), then the name was modified accordingly.

Due to time constraints, missing address information and phone numbers were filled in after the school sample was selected. These fields were not crucial to the selection of the school sample.

## District Frame Creation

The public school district frame consisted of those districts that were operating within the United States and that oversaw at least one school on the 2007–08 SASS school universe file. The 2005–06 CCD included 18,207 district records, of which 17,009 were presumed to be eligible for SASS according to these rules. The following types of records were deleted from the 2005–06 CCD district file:

- sixteen districts listed on the CCD file that operated outside of the United States;
- twenty-two BIE regional offices that did not meet the SASS definition of a school district—while they do provide funding to the schools, they often are not involved in hiring, firing, or setting policies; and
- districts on the CCD file that were presumed not to operate schools. Comparing the district file to the school file identified these records. There were 1,351 districts without at least one corresponding school that were deleted from the file. These district records appeared to be administrative units rather than schools, as described previously in the Frame Additions section.

In addition, 191 district records were added so that the Career Technical Centers added to the school frame would be represented on the district frame.

Table 10 shows the totals for all districts by state during the frame creation.

**Table 10. Total number of public school districts (includes public charter and single school districts) during the frame creation, by state: 2007–08**

State	Preliminary 2005–06 CCD <sup>1</sup> file	After deletions (outlying, closed, and BIE <sup>2</sup> districts)	Final public district universe (ineligible districts deleted and CTC <sup>3</sup> districts added)
Total	18,207	18,169	17,009
BIE districts <sup>2</sup>	22	0	0
Charter and state-run districts (included in the state totals below)	2,020	2,020	2,020
Alabama	165	165	164
Alaska	54	54	54
Arizona	609	609	585
Arkansas	293	293	282
California	1,132	1,132	1,157
Colorado	202	202	183
Connecticut	196	196	193
Delaware	39	39	38
District of Columbia	54	54	49
Florida	74	74	77
Georgia	204	204	189
Hawaii	1	1	1
Idaho	126	126	126
Illinois	1,106	1,106	1,000
Indiana	366	366	345

See notes at end of table.

**Table 10. Total number of public school districts (includes public charter and single school districts) during the frame creation, by state: 2007–08—Continued**

State	Preliminary 2005–06 CCD <sup>1</sup> file	After deletions (outlying, closed, and BIE <sup>2</sup> districts)	Final public district universe (ineligible districts deleted and CTC <sup>3</sup> districts added)
Iowa	379	379	365
Kansas	313	313	306
Kentucky	196	196	235
Louisiana	97	97	88
Maine	331	331	236
Maryland	26	26	26
Massachusetts	496	496	390
Michigan	832	832	841
Minnesota	574	574	527
Mississippi	163	163	163
Missouri	532	532	532
Montana	528	528	370
Nebraska	558	558	491
Nevada	19	19	18
New Hampshire	268	268	182
New Jersey	673	673	649
New Mexico	89	89	89
New York	867	867	847
North Carolina	216	216	217
North Dakota	254	254	232
Ohio	1,231	1,231	1,068
Oklahoma	602	602	592
Oregon	221	221	202
Pennsylvania	738	738	725
Rhode Island	50	50	50
South Carolina	102	102	104
South Dakota	188	188	177
Tennessee	136	136	-138
Texas	1,291	1,291	1,266
Utah	99	99	97
Vermont	365	365	268
Virginia	226	226	206
Washington	306	306	301
West Virginia	57	57	58
Wisconsin	463	463	448
Wyoming	62	62	62
American Samoa, Guam, Northern Marianas, Puerto Rico, and U.S. Virgin Islands	16	0	0

<sup>1</sup> CCD refers to the Common Core of Data.<sup>2</sup> BIE refers to the Bureau of Indian Education.<sup>3</sup> CTC refers to Career Technical Center.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Frame Data File," 2007–08.

## Public and BIE School Sample Allocation

The goals for the public school sample of the 2007–08 SASS were similar to those of the 2003–04 SASS and were as follows:

- Use the 2005–06 CCD school file as the sample frame with exceptions noted in the previous Public and BIE Frame Creation section.
- Produce state estimates of public school characteristics.
- Produce state/elementary and state/secondary estimates of the number of public schools and associated public school characteristics.
- Produce national estimates of combined-grade public schools, meaning schools that offer grades that span both elementary and secondary levels.
- Produce national estimates by various geographic designations (e.g., region and locale) and school characteristics for public schools.
- Oversample schools with 19.5 percent or greater American Indian or Alaska Native enrollment, in order to be able to produce national estimates of these schools and selected school characteristics.
- Produce national and regional estimates of public charter schools and selected school characteristics.
- Select all BIE-funded schools that meet the SASS definition of a school.

### ***Methodology***

The SASS sample is not a simple random sample, but rather is a stratified probability proportionate to size (PPS) sample. For more information on the sample allocation design goals in SASS, please see Abramson et al. (1996). The first level of stratification for public and BIE-funded schools was school type: (A) BIE-funded schools were selected with certainty (automatically in sample); (B) schools with high American Indian or Alaska Native student enrollment (schools with 19.5 percent or more American Indian or Alaska Native students); (C) schools in Delaware, Maryland, Florida, Nevada, and West Virginia, where at least one school from each district in the state was selected as described in the following Sample Selection section; (D) public charter schools; (E) Career Technical Center (CTC) schools; and (F) all other schools. Schools falling into more than one category were assigned to types A, B, D, E, C, and F in that order.

The second level of stratification varied within school type. All of the type A schools were selected for the sample so no additional stratification was needed. Type B schools were stratified by state (Arizona, California, Montana, New Mexico, Washington, the remaining Western states, Minnesota, North Dakota, South Dakota, the remaining Midwestern states, North Carolina, Oklahoma, and the remaining states except Alaska<sup>5</sup>). Type C schools were stratified first by state and then school district. Type D schools were stratified by state (Alaska, Arizona, California, Colorado, Hawaii, Idaho, New Mexico, Oregon, Utah, the remaining Western states, Indiana, Minnesota, Michigan, Ohio, Wisconsin, the remaining Midwestern states, Delaware, District of Columbia, Florida, Georgia, Louisiana, North Carolina, Texas, the remaining Southern states, Massachusetts, New Jersey, New York, Pennsylvania, and the remaining Northeastern states). Type E schools were all placed into one stratum due to the small size of the group. The type F schools were stratified by state (all remaining states including the District of Columbia).

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<sup>5</sup> Alaska was excluded because most schools have a high Alaska Native enrollment and because the sampling rate applied to Alaska schools was higher than the sampling rate applied to other schools with high American Indian or Alaska Native student enrollment. Also note that Alaska does not have any BIE-funded schools. Alaskan statehood legislation specifically excluded Alaska schools from becoming funded by the BIE.

Each of the school types, B through F, was then stratified by grade level (elementary, secondary, and combined) as defined below:

- Elementary:    lowest grade  $\leq 6$  and highest grade  $\leq 8$ ;  
Secondary:    lowest grade  $\geq 7$  and highest grade  $\leq 12$ ; and  
Combined:    lowest grade  $\leq 6$  and highest grade  $> 8$ , or school is ungraded.<sup>6</sup>

The 2007–08 SASS sample was allocated so that state-level elementary and secondary public school estimates and national estimates of combined public schools could be made. The sample was allocated to each state by grade range and school type (traditional public, public charter, and schools with high American Indian enrollment). A full description of the allocation procedure is located in “Appendix N. 2007–08 SASS School Sample Allocation Procedure.”

### ***Sample Sort***

To facilitate the calculation of school district weights, it was important that within a stratum all schools belonging to the same school district were listed together. This could have been achieved by sorting first by the school district’s identification variable (LEA ID). However, to increase the efficiency of the school sample design, it was better to sort by other variables before LEA ID. To achieve both these goals, the ZIP code variables were recoded to make them the same for every school within a stratum/school district. After the ZIP code was recoded, the non-BIE schools were sorted by the following variables:

1. school stratum code as defined in the Methodology section above;
2. state;
3. locale code:
  - 11 = city, large: territory inside an urbanized area and inside a principal city with population of 250,000 or more;
  - 12 = city, mid-size: territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000;
  - 13 = city, small: territory inside an urbanized area and inside a principal city with population less than 100,000;
  - 21 = suburb, large: territory inside an urbanized area and outside a principal city with population of 250,000 or more;
  - 22 = suburb, mid-size: territory inside an urbanized area and outside a principal city with population less than 250,000 and greater than or equal to 100,000;
  - 23 = suburb, small: territory inside an urbanized area and outside a principal city with population less than 100,000;
  - 31 = town, fringe: territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area;
  - 32 = town, distant: territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area;
  - 33 = town, remote: territory inside an urban cluster that is more than 35 miles from an urbanized area;
  - 41 = rural, fringe: Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster;

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<sup>6</sup> Ungraded schools refer to schools that serve students whose grade levels are not defined as grades 1 through 12, but serve students of an equivalent age range. For example, special education centers and alternative schools often classify their students as ungraded.

- 42 = rural, distant: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster;
- 43 = rural, remote: Census-defined rural territory that is more than 25 miles from an urbanized area, as well as rural territory that is more than 10 miles from an urban cluster;
- 4. recoded ZIP code (all schools in stratum/district had the same value for this variable);
- 5. district ID as defined on CCD;
- 6. school's highest grade offered (in descending order);
- 7. recoded percent minority enrollment (in descending order) and defined as
  - 1 = less than 5.5 percent minority enrollment or unknown,
  - 2 = at least 5.5 percent but less than 20.5 percent minority enrollment,
  - 3 = at least 20.5 percent but less than 50.5 percent minority enrollment, and
  - 4 = at least 50.5 percent minority enrollment;
- 8. total enrollment (in serpentine sort order, which was defined as enrollment being sorted first in ascending then descending order within the other sort variables); and
- 9. CCD school ID.

This sort order differed slightly from the sort used in previous SASS administrations. A discussion of the steps taken to determine the sort order for the non-BIE schools is listed in appendix N. The first four sort variables allowed a geographic balance to be achieved within locale for each state. The locale used was based on the new 12-level locale rather than the eight-level code used in previous rounds of SASS. The fifth variable guaranteed that schools within a district and school stratum stayed together. The sixth variable (school's highest grade) allowed for the sampling of a sufficient number of middle schools to produce reasonably reliable state estimates. Since middle schools (defined in SASS as having both its lowest and highest grade in any of grades 5–9) were not stratified explicitly into one grade level stratum, some of them were classified as elementary and some as secondary. To better control the actual number of middle schools selected, this sort achieved that aim by placing middle schools at the end of the secondary stratum and at the beginning of the elementary school stratum. The seventh variable (recoded minority) allowed a balance with respect to race/ethnicity. The eighth variable (school enrollment) also encouraged a balance with respect to school size.

## **Public and BIE School Sample Selection**

### **Schools**

Within each stratum, all non-BIE schools were systematically selected using a probability proportionate to size algorithm. The measure of size used for the schools was the square root of the number of full-time equivalent teachers reported for each school or imputed during sampling frame creation. Any school with a measure of size greater than the sampling interval (the inverse of the rate at which the sample is selected) was included in the sample with certainty and automatically excluded from the probability sampling operation. This means that schools with an unusually high number of teachers relative to other schools in the same stratum were automatically included in the sample. In Delaware, Florida, Maryland, Nevada, and West Virginia, the school probabilities of selection within each school district were analyzed. If the pattern of probabilities (i.e., the sum of the probabilities of schools within school district and grade level) did not guarantee that a school would be sampled from that school district, then the school with the highest probability of selection was included in the sample with certainty. This guaranteed that all school districts in these states would have at least one school in sample. The reason for this is discussed in the subsequent section on district sampling. The BIE-funded schools were also selected for the sample with certainty. This produced a non-BIE school sample of 9,795 (453 high American Indian enrollment schools, 370 public charter schools, 20 CTC schools, and 8,952 other traditional public

schools) and a BIE-funded school sample of 178 schools for a total of 9,973 sampled public and BIE-funded schools in the 2007–08 SASS.

Table 11 shows the selected sample sizes for traditional public schools (excluding public charter, high American Indian or Alaska Native enrollment, BIE-funded, and Career Technical Center schools). The public charter school sample is shown in table 12. The high American Indian or Alaska Native enrollment schools are presented in table 13. The Career Technical Center schools were selected from one stratum, so no corresponding table is presented. Each selected public school was also in sample for the principal and the school library media center surveys, so no additional sampling was needed.

**Table 11. Selected sample sizes for other traditional public schools by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2007–08**

State	School level			Total sampled schools	Percent of state's frame in sample
	Elementary	Secondary	Combined		
Total	4,213	3,613	1,126	8,952	10.11
Alabama	80	80	17	177	11.29
Alaska	80	53	60	193	39.55
Arizona	80	80	17	177	12.66
Arkansas	80	80	24	184	19.21
California	230	128	37	395	4.35
Colorado	72	72	17	161	11.10
Connecticut	80	80	17	177	16.71
Delaware	77	29	17	123	58.57
District of Columbia	71	23	10	104	59.77
Florida	98	94	41	233	7.11
Georgia	72	72	17	161	6.83
Hawaii	55	29	6	90	35.02
Idaho	80	80	17	177	26.86
Illinois	80	80	17	177	4.30
Indiana	80	80	17	177	9.28
Iowa	72	72	17	161	12.30
Kansas	72	72	17	161	12.14
Kentucky	72	72	17	161	11.60
Louisiana	72	72	17	161	11.03
Maine	80	80	13	173	25.98
Maryland	80	80	17	177	12.67
Massachusetts	80	80	13	173	9.93
Michigan	93	80	26	199	5.59
Minnesota	103	86	63	252	12.36
Mississippi	72	72	17	161	15.42
Missouri	90	80	44	214	10.70
Montana	80	57	27	164	33.33
Nebraska	80	80	34	194	18.89
Nevada	80	65	15	160	30.65
New Hampshire	80	45	7	132	29.93

See notes at end of table.

**Table 11. Selected sample sizes for other traditional public schools by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2007–08—Continued**

State	School level			Total sampled schools	Percent of state's frame in sample
	Elementary	Secondary	Combined		
New Jersey	72	72	17	161	6.60
New Mexico	80	80	17	177	29.60
New York	80	72	17	169	3.69
North Carolina	72	72	17	161	7.28
North Dakota	80	44	61	185	49.47
Ohio	72	72	17	161	4.55
Oklahoma	72	72	17	161	19.21
Oregon	80	80	17	177	15.06
Pennsylvania	80	80	17	177	5.49
Rhode Island	80	41	3	124	38.99
South Carolina	80	80	10	170	14.98
South Dakota	80	32	41	153	38.73
Tennessee	72	72	17	161	9.72
Texas	83	103	64	250	3.01
Utah	80	80	17	177	19.75
Vermont	80	40	17	137	39.60
Virginia	129	80	17	226	11.06
Washington	80	80	17	177	8.40
West Virginia	80	80	17	177	22.55
Wisconsin	80	80	17	177	9.63
Wyoming	80	48	17	145	43.81

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Sample Data File," 2007–08.

**Table 12. Selected sample sizes for public charter schools by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2007–08**

State	School level			Total sampled schools	Percent of state's frame in sample
	Elementary	Secondary	Combined		
Total	171	103	96	370	9.62
Arizona	14	12	4	30	6.62
California	21	16	13	50	8.33
Colorado	6	2	3	11	9.32
Idaho	2	2	2	6	20.00
New Mexico	2	2	2	6	10.91
Utah	2	2	2	6	13.95
Alaska	2	2	2	6	26.09
Hawaii	2	2	2	6	22.22
Oregon	2	2	2	6	11.76
Remaining Western states	2	2	2	6	31.58
Michigan	15	4	4	23	8.95
Ohio	11	8	13	32	8.14
Wisconsin	5	4	2	11	6.21
Indiana	2	2	2	6	17.14
Minnesota	5	3	2	10	6.45
Remaining Midwestern states	2	2	2	6	10.71
Florida	18	5	2	25	7.60
North Carolina	6	2	2	10	10.31
Texas	10	7	10	27	7.78
District of Columbia	7	4	4	15	31.25
Georgia	5	2	2	9	15.00
Louisiana	2	2	2	6	19.35
Delaware	2	2	1	5	31.25
Remaining Southern states	4	2	2	8	9.20
Pennsylvania	6	2	4	12	10.34
Massachusetts	4	2	2	8	13.56
New Jersey	4	2	2	8	14.81
New York	6	2	2	10	12.66
Remaining Northeastern states	2	2	2	6	17.65

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U. S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Sample Data File," 2007–08.

**Table 13. Selected sample sizes for schools with high American Indian or Alaska Native enrollment by school level, the total number of sampled schools, and the percentage of the frame in sample, by state: 2007–08**

State	School level			Total sampled schools	Percent of state's frame in sample
	Elementary	Secondary	Combined		
Total	223	150	80	453	26.65
Arizona	24	28	2	54	29.19
California	8	8	2	18	12.95
Minnesota	7	8	3	18	17.82
Montana	9	4	6	19	25.00
New Mexico	20	15	2	37	31.90
North Carolina	12	5	2	19	38.00
North Dakota	3	3	3	9	27.27
Oklahoma	92	50	42	184	30.16
South Dakota	10	4	6	20	23.81
Washington	7	5	2	14	20.59
Remaining Western states	11	8	2	21	23.08
Remaining Midwestern states	13	8	5	26	25.49
Remaining Southern states and Northeastern states	7	4	3	14	31.11

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Sample Data File,” 2007–08.

### **Districts**

Two methods were used for sampling districts within specific states. Districts in five states were selected differently than those in the remaining states, so the sampling procedure for most states is described first followed by the sampling procedure for the exceptional states.

**1. Districts outside Delaware, Florida, Maryland, Nevada, and West Virginia.** During the initial design development of SASS, consideration was given to selecting the school districts first and then selecting schools within these districts. It was hypothesized that doing this would reduce the reliability of both school and teacher estimates but might improve the reliability of school district estimates. Simulations done on the reliability of school district estimates when the districts were selected first confirmed the loss of reliability in school and teacher estimates. The simulations also showed that selecting schools first would produce only slightly less accurate district estimates. For these reasons the SASS sample design selects the schools first.

Therefore, the school district sample consists of the set of districts that were associated with the SASS public school sample. This provides the linkage between the district and the school. Table 14 provides the number of school districts selected by state. This can be compared with the number of districts on the frame in each state as presented earlier in table 10. Note that district totals for some states appear higher than expected due to the inclusion of CTC schools as school districts. In parts of Maine, Vermont, and New Hampshire, some of the districts were dropped and the sampled schools were instead associated with their Supervisory Unions. This was done because we had evidence indicating that the Supervisory Union handled the day-to-day administration of the schools rather than the school districts. There were not any districts without schools selected for the 2007–08 sample as had been done in some previous SASS

cycles, since most of these districts did not have associated teachers, and thus were ineligible for the survey.

**2. Districts inside Delaware, Florida, Maryland, Nevada, and West Virginia.** In 2003, a simulation study was done for each state to assess the reliability of SASS school district estimates. The study showed that standard errors from Delaware, Florida, Maryland, Nevada, and West Virginia were high relative to the sampling rate. To reduce the standard error, all districts in these states were defined as school sampling strata. This placed all districts in each of these five states in the school district sample thus reducing the standard error to zero, if all districts respond.

**Table 14. Number of sampled public school districts (includes charter school districts), by state: 2007–08**

State	Districts	State	Districts
Total	5,248	Missouri	150
Alabama	90	Montana	134
Alaska	43	Nebraska	122
Arizona	140	Nevada	17
Arkansas	121	New Hampshire	73
California	291	New Jersey	142
Colorado	78	New Mexico	69
Connecticut	107	New York	123
Delaware	28	North Carolina	88
District of Columbia	16	North Dakota	116
Florida	74	Ohio	164
Georgia	83	Oklahoma	224
Hawaii	1	Oregon	100
Idaho	85	Pennsylvania	152
Illinois	140	Rhode Island	37
Indiana	126	South Carolina	73
Iowa	116	South Dakota	96
Kansas	113	Tennessee	63
Kentucky	100	Texas	207
Louisiana	58	Utah	44
Maine	108	Vermont	61
Maryland	25	Virginia	93
Massachusetts	136	Washington	114
Michigan	183	West Virginia	62
Minnesota	172	Wisconsin	139
Mississippi	102	Wyoming	49

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Sample Data File,” 2007–08.

## Private School Frame Creation and Sample Selection

### Private List and Area Frame Creation

The 2007–08 SASS private school sample consisted of schools selected from a list frame and an area frame. The SASS private school sample size was 2,937 of which 2,760 schools were from the list frame and 177 were from the area frame. The area frame serves as coverage improvement since the list frame is believed to contain some undercoverage of private schools.

#### ***List Frame***

Most of the SASS private school sample comes from a list frame, which is a frame constructed from matching various sources of private school lists. The base list for the 2007–08 SASS list frame was the 2005–06 Private School Survey (PSS). In order to provide coverage of private schools founded since 2006 and to improve coverage of private schools existing in 2006, membership lists were collected by the U.S. Census Bureau in the summer of 2006 from private school associations and religious denominations. The associations were asked to include schools that met the PSS school definition when they provided lists. The 50 states and the District of Columbia were also asked to provide lists of private schools meeting the PSS definition of a school. Schools on private school association membership lists and the state lists were compared to the base list. Any school that did not match a school on the base list was added to the existing list frame as a list frame birth. This is the usual method that is followed to create a revised PSS list frame every 2 years.

This updating process was conducted specifically for the 2007–08 PSS, but was used as the starting point for the sampling frame for SASS private schools. To create the SASS sampling frame, schools with a highest grade of kindergarten, which are schools by the more expansive PSS definition but not the SASS definition, were deleted.

#### ***Area Frame***

The source for the 2007–08 SASS area frame schools was the 2005–06 PSS area frame, excluding schools with a highest grade of kindergarten. To create the 2005–06 PSS area frame, the United States was divided into 2,062 primary sampling units (PSUs). Within each PSU, the Census Bureau attempted to find all private schools eligible for PSS as part of the PSS area frame operation. A block-by-block listing of all private schools in a sample of PSUs was not attempted. Rather, regional office field staff created the frame by using yellow pages, local Catholic dioceses, religious institutions, local education agencies, and local government offices. Once the area search lists of schools were constructed, they were matched with the PSS list frame school universe. Schools not found on the list frame were considered part of the area frame.

A total of 123 distinct PSUs were in the 2005–06 PSS area sample. Each PSU consisted of a single county, independent city, or cluster of geographically contiguous areas with a minimum population of 20,000 according to population projections for 1988, which was when the PSUs were first formed. To avoid having PSUs covering too large a land area, the minimum population standard was relaxed in sparsely-populated areas. The eight largest counties in the nation were selected with certainty for the PSS area frame. The remaining PSUs were selected from a random probability sampling process. These PSUs are termed noncertainty since they were not selected with certainty. Area frame schools in the 2005–06 PSS in certainty PSUs were removed from the SASS area frame and moved to the list frame. In addition, the 2007–08 PSS list frame updating picked up some of the area frame schools. These two frames then were unduplicated, with the duplicate schools being dropped from the SASS area frame. Schools that

could be defined as only teaching kindergarten as the highest grade or only teaching adult education or postsecondary were also removed from the 2007–08 SASS area frame.

The 2005–06 PSS area frame was designed to have approximately 50 percent of the PSUs overlap with the previous PSS. By maintaining a 50 percent overlap of PSUs, the reliability of estimates of change was maintained at a reasonable level. Consequently, the 2005–06 PSS area frame consisted of two sets of sample PSUs: 1) a subsample of the 2003–04 PSS area frame sample PSUs (overlap); and 2) a sample of PSUs selected independently from the 2003–04 PSS sample (nonoverlap).

Six of the eight PSUs (certainty PSUs) that are included in every PSS area sample remained in the 2005–06 PSS area frame with certainty. The other two of the original eight were included in the noncertainty PSU selection for the 2005–06 PSS area frame. Two new certainty PSUs, which were originally included in the 2003–04 PSS, were added to the original six, making eight certainty PSUs. All 58 PSUs that had been in the 2003–04 PSS area frame for the first time and not previously included in the overlap sample were selected again for the 2005–06 PSS, resulting in a total overlap sample of 66 PSUs. An additional 58 PSUs were selected independently, but 1 of these had already been selected, so only 57 PSUs were added to the 66 already in the area sample.

The strata for selecting the non-overlap PSUs for the 2005–06 PSS area sample were defined the same as the 2003–04 PSS area frame design. Initially, 16 strata were created as had been done for prior cycles of PSS. The strata include region (Northeast, Midwest, South, West), metro/nonmetro status, and high/low percent private enrollment within metro/nonmetro status (i.e., above or below the median enrollment within each metro/nonmetro status). The high/low cutoffs were then adjusted so as to more nearly equalize the expected variance between the two strata. The purpose of this was to try to lower the PSS or SASS standard errors resulting from the PSU sampling.

Sample sizes were determined for each metro/nonmetro status within each region, proportional to the sum of the square root of the PSU estimated PSS private school enrollment. Some adjustments were made so that each sample size was an even number and that sample size was evenly distributed between the high and low percent private enrollment groups. This was done in order to have an even number of cases in each stratum (with a minimum of two) for pairing purposes for the PSS or SASS variance estimation.

## **Complete Private School Frame**

The list and area frames were combined to create the complete frame. At this point, the frame still contained ineligible school records and those records that were missing vital information.

### ***Frame Deletions***

The following types of records were deleted from the PSS list and area frames to create the SASS sample frames:

- schools not previously appearing on the 2007–08 list frame (births) that were identified from the early childhood center (ECC) frame (a PSS operation whereby states are specifically asked for schools with kindergarten as the highest grade);
- schools from noncertainty PSUs of the 2005–06 PSS area frame that were added to the 2007–08 PSS list frame;
- schools with kindergarten as the highest grade level; and
- schools that were determined to be out-of-scope for the 2005–06 PSS (i.e., closed, pre-kindergarten only, not providing classroom instruction).

### **Frame Corrections**

There were several school records that were missing information needed during the school sample selection. The school grade range and affiliation variables were used in stratifying schools during the private school sampling process. The number of teachers was used to form the measure of size in the private school sampling process. Finally, the number of students was used in sorting private school records during sampling. Values were assigned for any of these fields if the data were missing in the manner discussed below.

The school's grade range was assigned in one of four ways:

- taking information from earlier PSS data;
- using the school's name to assign a generic grade range (i.e., "Elementary" schools were assigned grades K–6, "Middle" schools were assigned grades 6–8, and "High" schools were assigned grades 9–12);
- calling the school to assign a specific grade range; or
- assigning a grade level of combined (both elementary and secondary levels), as a last resort.

The school's affiliation stratum was assigned by

- using information from earlier PSS data;
- using the school's name to assign an association membership; and
- assigning the rest to the "Nonsectarian—regular" category.

The school's student and teacher counts were imputed in the following ways:

- using previous PSS data for that school; and
- using current SASS frame student-teacher ratios and averages by grade level and affiliation.

### **Private School Sample Allocation**

The goals for the 2007–08 SASS private school sample size allocation for the most part remained the same as the 2003–04 goals:

- Produce detailed Private School Affiliation group estimates for each of the 11 affiliations. (NOTE: Some affiliations were deleted since 2003–04, changing the total number of affiliations from 17 to 11.)
- Produce national private sector estimates.
- Produce national private sector school level estimates.
- Produce estimates for national and regional public versus private sector comparisons.

The number of affiliation groups was reduced so as to create larger groups that would yield more stable affiliation estimates and more reliable national estimates. Other religious schools were organized into five groups corresponding to the four largest non-Catholic affiliations as well as "other religious."

### **List Frame Methodology**

The list frame was partitioned into an initial set of cells using affiliation (11 groups), grade level (three groups), and Census region (four groups). These cells were defined using the 2005–06 PSS data. For any records with missing values for variables used in the assignment, the data were imputed.

The first level of stratification was school affiliation (11 groups):

- Catholic—parochial;
- Catholic—diocesan;
- Catholic—private;
- Baptist;
- Jewish;
- Lutheran;
- Seventh-day Adventist;
- Other religious;
- Nonsectarian—regular;
- Nonsectarian—special emphasis; and
- Nonsectarian—special education.

Within each affiliation, schools were stratified by grade level (elementary, secondary, and combined schools). The definitions are provided below:

- Elementary:      lowest grade  $\leq 6$  and highest grade  $\leq 8$ ;  
Secondary:      lowest grade  $\geq 7$  and highest grade  $\leq 12$ ; and  
Combined:      lowest grade  $\leq 6$  and highest grade  $> 8$ , also includes ungraded<sup>7</sup> schools.

Within affiliation/grade level, schools were stratified by four Census regions: Northeast, Midwest, South, and West.

The private school sample size selected from the list frame was 2,760 schools. The allocation process consists of the steps outlined in appendix N. Table 15 shows the allocated sample sizes by selected characteristics.

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<sup>7</sup> Ungraded school refers to schools that serve students whose grade levels are not defined as grades 1 through 12, but serve students of an equivalent age range. For example, special education centers and alternative schools often classify their students as ungraded.

**Table 15. Allocated private school list frame stratum sample sizes, by region, school level, and affiliation stratum: 2007–08**

Affiliation stratum	Northeast				Midwest			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
Total	702	351	131	220	623	405	81	137
Catholic—parochial	120	109	9	2	142	130	8	4
Catholic—diocesan	91	64	24	3	114	85	25	4
Catholic—private	45	12	25	8	34	11	18	5
Baptist	21	5	2	14	30	5	2	23
Jewish	85	35	21	29	10	6	2	2
Lutheran	9	5	2	2	76	66	8	2
Seventh-day								
Adventist	13	8	2	3	17	10	2	5
Other religious	111	52	7	52	117	54	7	56
Nonsectarian—regular	109	31	24	54	37	15	4	18
Nonsectarian—special emphasis	42	25	6	11	32	21	3	8
Nonsectarian—special education	56	5	9	42	14	2	2	10
South								
Affiliation stratum	South				West			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
Total	887	384	78	425	548	290	71	187
Catholic—parochial	77	69	5	3	49	45	2	2
Catholic—diocesan	72	49	19	4	51	37	12	2
Catholic—private	30	9	13	8	26	6	14	6
Baptist	107	25	2	80	25	8	2	15
Jewish	18	10	3	5	14	9	3	2
Lutheran	21	17	2	2	25	21	2	2
Seventh-day								
Adventist	35	21	4	10	36	18	4	14
Other religious	292	100	11	181	144	56	9	79
Nonsectarian—regular	140	42	11	87	96	50	11	35
Nonsectarian—special emphasis	64	37	5	22	58	37	7	14
Nonsectarian—special education	31	5	3	23	24	3	5	16

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Sample Data File,” 2007–08.

### **List Frame Sample Sort**

Sorting serves to improve the efficiency of the overall design. Within each stratum, sorting took place on the variables listed below:

1. state (one for each state and the District of Columbia);
2. highest grade in the school;
3. urban-Centric Method Locale Code (based on 2000 Census geography):

- 11 = city, large: territory inside an urbanized area and inside a principal city with population of 250,000 or more;
  - 12 = city, mid-size: territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000;
  - 13 = city, small: territory inside an urbanized area and inside a principal city with population less than 100,000;
  - 21 = suburb, large: territory inside an urbanized area and outside a principal city with population of 250,000 or more;
  - 22 = suburb, mid-size: territory inside an urbanized area and outside a principal city with population less than 250,000 and greater than or equal to 100,000;
  - 23 = suburb, small: territory inside an urbanized area and outside a principal city with population less than 100,000;
  - 31 = town, fringe: territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area;
  - 32 = town, distant: territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area;
  - 33 = town, remote: territory inside an urban cluster that is more than 35 miles from an urbanized area;
  - 41 = rural, fringe: Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster;
  - 42 = rural, distant: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster;
  - 43 = rural, remote: Census-defined rural territory that is more than 25 miles from an urbanized area, as well as rural territory that is more than 10 miles from an urban cluster;
4. ZIP code;
  5. enrollment as reported in the 2005–06 PSS (or imputed); and
  6. PIN number (the PIN number is a unique number assigned to identify the school on PSS).

### ***Area Frame***

There were 177 area frame schools identified in the 2005–06 PSS area frame within noncertainty PSUs that had not already been added as part of the 2007–08 PSS list frame updating operation. All of the 177 area frame cases (in the noncertainty PSUs) remained in the area frame and were in sample.

### **Private School Sample Selection**

#### ***List Frame***

Within each stratum, private schools in the list frame were systematically selected using a probability proportionate to size algorithm. The measure of size used was the square root of the 2005–06 PSS number of teachers (in full-time equivalent counts) in the school. Any school with a measure of size larger than the sampling interval was excluded from the probability sampling process and included in the sample with certainty.

Table 16 shows the number of private schools that were sampled from the list frame and the percentage of the frame that was sampled for each affiliation stratum. Table 17 shows the number of private schools sampled from the list frame by school level and Census region as well as the percentage of the frame that was sampled within these categories.

**Table 16. Number and percentage of private schools selected from the list frame, by affiliation stratum: 2007–08**

Affiliation stratum	Number of sampled schools	Percent of list frame in sample
Total	2,760	9.7
Catholic—parochial	388	10.5
Catholic—diocesan	328	11.3
Catholic—private	135	13.8
Baptist	183	9.2
Jewish	127	14.0
Lutheran	131	8.1
Seventh-day Adventist	101	11.5
Other religious	664	7.8
Nonsectarian—regular	382	12.1
Nonsectarian—special emphasis	196	8.5
Nonsectarian—special education	125	9.2

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Sample Data File," 2007–08.

**Table 17. The number and percentage of private schools selected from the list frame, by school level and Census region: 2007–08**

School level and region	Number of sampled schools	Percent of list frame in sample
Total	2,760	9.7
School level		
Elementary	1,430	8.8
Secondary	361	12.6
Combined	969	10.6
Region		
Northeast	702	10.4
Midwest	623	9.2
South	887	10.1
West	548	9.3

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Sample Data File," 2007–08.

### **Area Frame**

All area frame private schools were selected for the sample.

## **SASS Teacher Frame and Sample Selection**

### **Frame Creation**

In the 2003–04 administration of SASS, sampled schools provided teacher rosters to field representatives during personal visits. The field representatives keyed the roster information into a laptop and teachers were selected from each cooperating sampled school, sometimes during the same personal visit. In this

administration, rosters were collected, primarily by mail, and keyed and sampled at a central location. This keying and sampling was done on an ongoing basis throughout the roster collection period.

Along with the names of its teachers, sampled schools were asked to provide the following descriptive characteristics of each teacher:

- teacher experience—teachers in their 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> year of teaching were classified as new teachers, teachers with 20 or more years of teaching were classified as highly experienced, and teachers with 4–19 years of experience were classified as mid-career;
- teaching status:
  - part-time; or
  - full-time;
- subject matter taught—teachers were classified as special education, general elementary, math, science, English/language arts, social studies, vocational/technical, or other; and
- whether the school felt the teacher would likely be teaching at the same school next year.

## **Stratification**

Within each sampled school, teachers were stratified into one of five teacher types:

- A. new teachers expected to stay at their current school;
- B. mid-career and highly experienced teachers expected to stay at their current school;
- C. new teachers expected to leave their current school;
- D. mid-career teachers expected to leave their current school; or
- E. highly experienced teachers expected to leave their current school.

## **Teacher Sample Allocation**

The goals of the teacher sampling were as follows:

- Select approximately 1,500 public and 500 private school teachers expected to leave.
- Select a minimum of 2,300 new teachers by sector. For new teachers in public schools, oversampling was not required due to the large number of sampled schools with new teachers. Therefore, teachers were allocated to the new, mid-career, and highly experienced categories proportional to their numbers in the school. However, for private school teachers, new teachers were oversampled to ensure that there would be enough new private school teachers in both the 2007–08 SASS and the 2008–09 Teacher Follow-up Survey. In private schools, new teachers were oversampled by a factor of 1.5.
- Select a minimum of one and a maximum of 20 teachers per school.
- Minimize the variance of teacher estimates within school stratum by attempting a self-weighting design. This constraint was relaxed to accommodate the other goals of teacher sampling.
- Select an average of three to eight teachers per school depending upon grade range and sector. The average teacher sample size was limited to this to avoid overburdening the schools, while allowing for a large enough teacher sample to meet the reliability requirements.

Before teachers were allocated to strata, schools were first allocated an overall number of teachers to be selected. This overall sample size was chosen so as to equalize the teacher weights within school stratum (i.e., state/level for public schools, association stratum/level/region for private schools). Teacher weights within stratum were not always equalized, however, due to the minimum and maximum constraints.

Table 18 provides the average number of teachers to be selected within each public and private school by school level.

**Table 18. Average expected number of teachers selected per school, by school level and sector: 2007–08**

School sector	Average number of teachers selected by school level		
	Elementary	Secondary	Combined
Public and BIE <sup>1</sup>	3.77	7.54	5.66
Private	3.76	4.69	2.82

<sup>1</sup> BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2007–08.

For a given school, the teacher sample size was chosen to equalize the teacher weights within a school stratum. Since the school sample was selected proportional to the square root of the number of teachers in the school, an equally-weighted teacher sample within a school stratum was obtained by selecting  $t_i$  teachers in school  $i$ .

$$t_i = W_i * T_i(C/Y)$$

where

- $W_i$  is the school weight for school  $i$  (the inverse of the school selection probability).
- $T_i$  is the number of teachers in school  $i$ , as reported on the Teacher Listing Form.
- $C$  is the average teacher cluster size in the frame/grade level category (see table 18).
- $Y$  is the simple average of the school's base-weighted number of teachers over all schools in the school stratum.

Given the number of teachers selected in each school,  $t_i$ , teachers were allocated to the strata,  $A$  through  $E$ , in the following manner.

$$t_{ij} = \frac{t_i * T_{ij} * K_j}{\sum_{j=A}^E T_{ij} * K_j}$$

where

- $K_j$  is the oversampling factor for the particular teacher stratum,  $j$ .
- $T_{ij}$  is the number of teachers from stratum  $j$  in school  $i$ .
- $t_{ij}$  is the number of sample teachers selected from school  $i$  and stratum  $j$ .

The values of  $K$  that were applied to the teacher sampling were fixed for teacher strata A (at 1.0) and B (1.0 for public schools and 1.5 for private schools). The values for strata C, D, and E were adjusted throughout the teacher sampling operation so as to help meet the sample size goals of the teacher sampling operation.

Accordingly, the ranges of oversampling rates given in table 19 were applied to the teachers expected to leave the school.

**Table 19. Ranges of oversampling factors applied to SASS sampled teachers expected to leave their school in the following school year, by sector and type of teacher: 2007–08**

Type of teacher	Public	Private
New teachers expected to leave	1.54–1.92	2.29–4.82
Mid-career teachers expected to leave	1.03–1.73	2.86–6.23
Highly experienced teachers expected to leave	1.23–2.53	2.29–15.84

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2007–08.

To make sure a school was not over burdened the maximum number of teachers per school was set at 20. When the number of sampled teachers exceeded 20 in a school, the sample size,  $t_i$ , was reduced proportionally in all strata to achieve a final sample size of 20.

### Teacher Sample Selection

Teacher records within a school were sorted by the teacher stratum code, the teacher subject code, and the teacher line number code. The teacher line number is a unique number assigned to identify the teacher within the list of keyed teachers. Within each teacher stratum in each school, teachers were selected systematically with equal probability. Table 20 shows the number of teachers selected as described above.

**Table 20. Number of selected public and private school teachers in the SASS sample, by sector and teacher stratum: 2007–08**

Teacher stratum	Total	Public	Private
Total	56,584	48,353	8,231
New stayer	11,402	9,167	2,235
Mid-career and highly experienced stayer	43,265	37,730	5,535
New leaver	559	387	172
Mid-career leaver	546	369	177
Highly experienced leaver	812	700	112

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2007–08.

The selected sample may differ from the planned sample. The planned sample was computed based on universe files of teacher counts from 2 years prior (CCD for public, PSS for private) instead of reported teacher counts from the school just prior to data collection. Also, the response rate for the completed Teacher Listing Forms may be lower than expected, changing the number of schools from which to select sampled teachers. About 17 percent of the in-scope private schools and 13 percent of the in-scope public schools did not provide teacher lists. For these schools, no teachers were selected. A factor in the teacher weighting was used to adjust the weights to reflect the fact that some schools did not provide teacher lists. These factors may cause the overall average number of teachers per school to be slightly different than the target numbers.

To reduce the variance of teacher estimates, one goal of the teacher selection was to make the teacher sample self-weighting (i.e., equal probabilities of selection), within teacher and school stratum, but not across strata. The goal was generally met. However, since the sample size of teachers in some schools was altered due to the minimum constraint (i.e., at least one teacher per school) or maximum constraint (i.e., no more than either twice the average stratum allocation or 20 teachers per school), this goal was not fully achieved in all schools.

## **Field Sampling Activities**

Once a sampled school was contacted in the screener or the Teacher Listing Form Quality Check, the grade range was verified. Occasionally, the grade range differed considerably due to a difference in the school's actual grade range and how it was reported on the sampling frame. When a considerable difference occurred and the school reported fewer grades than expected, the sampled school was considered to have split into two or more schools. In this instance, the responding school was asked to provide a list of all of the schools that covered the sampled grade range. Consequently, one school was randomly subsampled from the list of schools covering the expected grade range. The school base weight was adjusted upward accordingly as described in chapter 9. If the school reported having more grades than expected, the respondent was interviewed, and the sampling frame was reviewed to see if the responding school corresponded to more than one sampling frame record. When this occurred, the sampled school was considered a merged school, and the base weight was adjusted downward to account for the fact that the respondent could have fallen into the sample through more than one sampling frame record.

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## **Chapter 5. Data Collection**

The 2007–08 Schools and Staffing Survey (SASS) utilized a primarily mail-based methodology for all questionnaires with telephone and field follow-up. Data collection operations for school districts were conducted independently from the collection of school-level questionnaires. School data collection included: the Teacher Listing Form; Principal Questionnaire or Private School Principal Questionnaire; School Questionnaire, Private School Questionnaire, or Public School Questionnaire (With District Items); School Library Media Center Questionnaire (for public and BIE-funded schools only); and Teacher Questionnaire or Private School Teacher Questionnaire. At the beginning of data collection, the U.S. Census Bureau telephone centers attempted to contact all sampled schools to verify their address, grade range, and school type (e.g., traditional public, private, public charter, etc.) and to establish a survey coordinator.<sup>8</sup> Nonrespondents were contacted by telephone interviewers and/or field representatives.

An overview of the purpose and content of each questionnaire is discussed in chapter 1. The changes in methodology from the 2003–04 SASS are described in chapter 2. A brief evaluation of the methodology is included at the end of this chapter.

### **Overview of School District Data Collection**

#### **Advance Work With School Districts**

School districts were contacted prior to the beginning of data collection for three main reasons.

First, approval for conducting SASS needed to be obtained from 90 school districts that were known to have a formal approval process in order for their schools to participate. These efforts began in February 2007 and continued throughout data collection. Depending upon the requirements of each district, a cover letter, a research application or standard proposal for research, and copies of the SASS questionnaires were sent to each district. The background, methods, findings, and recommendations of this operation are reported in detail in “Appendix O. Report on Results of Special Contact Districts.”

Second, some traditional public schools were verified as being “one-school districts,” or as the only school in the district. These schools received the SASS Public School Questionnaire (With District Items), which contains questions from the School Questionnaire in addition to some items from the School District Questionnaire (see chapter 2 for a more detailed explanation of this questionnaire). During May and June 2007, 810 schools were contacted by telephone to determine whether they were the appropriate respondent for questions that are typically asked on the School District Questionnaire. These included schools in districts that contained only one school (after the collapsing of schools from the Common Core of Data (CCD) frame, discussed in more detail in chapter 4) and schools in districts identified to be state agencies, such as the Department of Corrections. The intent of the calls was to identify entities that would receive the Public School Questionnaire (With District Items) and those that had an entity separate from the school that should receive the School District Questionnaire. The calling operation resulted in the identification of 630 one-school districts. The schools that were identified in this operation as well as 580 other schools, which included Bureau of Indian Education-funded schools, public charter schools, and Career and Technical Center schools, received the Public School Questionnaire (With District Items). In addition, approximately 200 school districts in Vermont and New Hampshire were contacted during the telephone operation to determine whether the appropriate respondent for the

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<sup>8</sup> The role of the survey coordinator was to be the main contact person at the school. A survey coordinator’s duties included facilitating data collection by passing out questionnaires to the appropriate staff, reminding the staff to complete them, and collecting the questionnaires to return to the U.S. Census Bureau.

School District Questionnaire was a staff member in the district office or in the supervisory union. In these states, it is common for school districts to be overseen by a supervisory union.

Finally, NCES wanted to obtain and/or verify contact information. In May and June 2008, remaining school districts were called to determine the best persons to receive the School District Questionnaire and to obtain their mailing address and telephone number. The calls made during the one-school district telephone operation collected this information as well to reduce burden on the respondents.

## **Timing of School District Data Collection**

The schedule for the school district data collection is presented in table 21.

**Table 21. Data collection time schedule for public school districts: 2007–08**

Activity	Month of activity
Advance work with some school districts to inquire about and respond to requirements by the school districts to approve surveys	Feb.–Aug. 2007
Telephone operation to some schools and school districts to determine which ones would receive the Public School Questionnaire (With District Items) and to identify appropriate respondents for the School District Questionnaire in New Hampshire and Vermont	May–Jun. 2007
Telephone operation to obtain contact person information for the School District Questionnaire	May–Jun. 2007
Introductory letter and the School District Questionnaire mailed to school districts	Sept. 2007
Continuation of work with some school districts to inquire about and respond to their requirements to approve participation in surveys	Sept. 2007–Apr. 2008
Mailed questionnaire returns accepted	Sept. 2007–Jun. 2008
Reminder postcard mailed to school districts that were mailed a School District Questionnaire	Sept. 2007
Second School District Questionnaire mailed to nonresponding school districts	Oct. 2007
Second reminder postcard mailed to nonresponding school districts	Oct. 2007
Telephone follow-up of nonresponding school districts	Nov.–Dec. 2007
Data retrieval for incomplete School District Questionnaires	Dec. 2007–Apr. 2008
Field follow-up of remaining nonresponding school districts	Jan.–Mar. 2008

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 2007–08.

## **Details of School District Data Collection**

### **Questionnaire Mailings and Reminder Postcards**

On September 19, 2007, an introductory letter and the School District Questionnaire were mailed to sampled school districts, with the exception of the one-school districts that received the Public School Questionnaire (With District Items) in lieu of the School District Questionnaire and School Questionnaire. The letter introduced the survey, informed the district that one or more schools in the district were selected to participate, and asked the district to complete and return the questionnaire within 2 weeks. The reverse side of the letter contained frequently asked questions, such as the purpose of SASS, the time commitment, and the confidentiality and collection authority information. The packages were addressed to the contact person whose name had been provided in the advance contact, or, if no name had been provided, to the “Superintendent.” Eligible respondents for the School District Questionnaire included any knowledgeable school district employee. In some school districts, several staff members provided the data.

Reminder postcards were mailed on September 26, 2007. On October 17, 2007, a second copy of the questionnaire was mailed to each school district that had not returned the original form. Another reminder postcard was mailed on October 24, 2007.

## **Telephone Nonresponse Follow-up of School Districts**

Telephone nonresponse follow-up of school districts was conducted from November 13 through December 18, 2007. During this operation, telephone interviewers called the contact person whose name had been provided in the advance contact, or, if no name had been provided, they attempted to reach another knowledgeable respondent. A knowledgeable respondent was someone in the District Office who was familiar with issues such as student enrollment, staff professional development, and teacher hiring. The purpose of the telephone nonresponse follow-up operation was to find out the status of district questionnaires that had not been received and to encourage district staff to participate. School District Questionnaires were provided for the interviewers to use if the respondent indicated that he or she was willing to complete the questionnaire over the phone.

## **Data Retrieval for Incomplete School District Questionnaires**

Data retrieval for incomplete School District Questionnaires was conducted from December 3, 2007, through April 1, 2008. All School District Questionnaires were reviewed by clerical staff at the U.S. Census Bureau's National Processing Center (NPC) prior to being assigned a check-in code. School districts that had returned their district questionnaire were included in the data retrieval operation for additional follow-up if one or more of the following questions were left blank:

- Question 2—Around the first of October, what was the total number of students enrolled in this district in all grade levels?<sup>9</sup>
- Question 3—Around the first of October, what was the total number of students enrolled in this district in grades K–12 and comparable ungraded levels?
- Question 8—Around the first of October, what was the total number of FTE (full-time equivalent) teachers employed by this district for grades K–12 and comparable ungraded levels?

School districts were also included in the data retrieval operation if fewer than 12 items, in addition to the three items above, contained data.

School District Questionnaires that were missing data for items 2, 3, or 8 or that did not have data for at least 12 other items were sent to the U.S. Census Bureau's Jeffersonville Telephone Center (JTC) for follow-up. During this operation, interviewers called the contact person who was identified during the initial district contact call operation. If a contact person had not been established or was unavailable, the interviewers attempted to speak to any knowledgeable respondent in the district office. A knowledgeable respondent was someone in the district office who was familiar with issues such as student enrollment, staff professional development, and teacher hiring. Interviewers used the original questionnaire that the school district returned to determine which questions to ask and recorded the responses directly on the questionnaire.

A total of 340 School District Questionnaires were eligible for the data retrieval operation. Of these, 330 school districts provided the necessary information for the questionnaire to be considered complete during

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<sup>9</sup> Although question 2 is not required for a School District Questionnaire to be considered complete during data processing, this item was included in the criteria for the data retrieval operation because it is critical during the imputation process.

the data retrieval operation. The remaining 10 school districts either could not be reached or would not provide the necessary information.

## **Field Nonresponse Follow-up of School Districts**

Field nonresponse follow-up of school districts was planned for January 16 through February 28, 2008; however, it was rescheduled for January 30 through March 13, 2008, due to a delay in preparing the necessary materials at NPC. During this operation, field representatives contacted the district contact person or a knowledgeable respondent by telephone or personal visit in order to determine the status of School District Questionnaires that had not been received and to encourage district staff to participate. Field representatives were given a labeled School District Questionnaire for each district they were assigned so that they could provide a replacement questionnaire if necessary. Field representatives encouraged district respondents to return their questionnaire by mail or made an appointment to personally pick-up the completed questionnaire.

After field nonresponse follow-up, returned questionnaires continued to be accepted by mail through June 9, 2008.

## **Overview of School Data Collection**

An advance letter was sent to sampled schools in June 2007 to identify cases with invalid addresses prior to the beginning of data collection. Data collection activities began in August 2007. These included the following:

- mailing the initial package of school-level questionnaires<sup>10</sup> to the school principal;
- telephoning the school and asking questions using a computer-assisted telephone interviewing (CATI) instrument to verify school information, establish a survey coordinator, and follow-up on the Teacher Listing Form;
- mailing a second package of outstanding school-level questionnaires to the survey coordinator, if one was established, or to the school principal;
- sampling teachers from the Teacher Listing Form and mailing the Teacher Questionnaires or Private School Teacher Questionnaires to the survey coordinator or to individual teachers;
- mailing a reminder postcard to survey coordinators;
- following-up on the Teacher Listing Form through field representatives via telephone calls and/or personal visits;
- telephoning the survey coordinators or individual respondents to remind them to complete and return the questionnaires;
- mailing a postcard to survey coordinators and respondents;
- mailing an additional questionnaire to all nonrespondents, including teachers;
- telephoning the survey respondents to attempt to complete the interview over the telephone;
- mailing a reminder postcard to teachers;
- following-up with nonrespondents through field representatives;
- mailing Teacher Questionnaires or Private School Teacher Questionnaires to nonresponding teachers; and
- mailing school-level questionnaires to nonresponding Bureau of Indian Education (BIE)-funded schools.

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<sup>10</sup> School-level questionnaires included the Teacher Listing Form; Principal Questionnaire or Private School Principal Questionnaire; School Questionnaire, Private School Questionnaire, or Public School Questionnaire (With District Items); and the School Library Media Center Questionnaire (for public and BIE-funded schools only).

## Advance Work With Schools

An advance letter was sent to sampled public and BIE-funded schools on June 4, 2007, and to sampled private schools on June 11, 2007. The letter briefly introduced the survey, alerted the principal that SASS would be conducted beginning in the fall, and asked the principal to contact the U.S. Census Bureau if the school name and address were not correct. Name and address corrections received by telephone were applied to the sample file prior to the initial mailout. In addition, addresses and telephone numbers were researched for schools that had their letters returned by the United States Postal Service (USPS) as undeliverable as addressed.

## Overall Timing of School Data Collection

The 2007–08 SASS principal, school, school library media center, and teacher data were collected during the 2007–08 school year. Table 22 summarizes the specific data collection activities and the time frame when each occurred. Details on the flow of cases into each follow-up operation and the response rates by questionnaire are presented later in this chapter.

**Table 22. Data collection time schedule for schools: 2007–08**

Activity	Month of activity
Advance letters mailed to schools to verify school name and address	Jun. 2007
Initial school package mailed to the school principal	Aug. 2007
Telephone operation (screener and Teacher Listing Form follow-up) to verify school information, establish a survey coordinator, and follow-up on the Teacher Listing Form	Aug.–Oct. 2007
Mailed questionnaire returns accepted	Sept. 2007–Jun. 2008
Second school package mailed to the survey coordinator or the school principal	Sept. 2007
Teachers sampled and Teacher Questionnaires mailed to survey coordinators or individual teachers	Sept. 2007–Mar. 2008
Reminder postcards mailed to survey coordinators	Oct. 2007
Field follow-up of Teacher Listing Forms	Oct.–Nov. 2007
Phase 1 of the telephone reminder operation to remind survey coordinators or individual respondents to complete and return the questionnaires	Nov.–Dec. 2007
Postcard mailed to survey coordinators and individual respondents	Dec. 2007–Jan. 2008
Replacement questionnaire mailed to all nonrespondents	Jan. 2008
Phase 1 of the telephone nonresponse follow-up operation to attempt to complete interviews over the telephone with nonrespondents	Jan.–Feb. 2008
Phase 1 of the field nonresponse follow-up operation for school-level and teacher questionnaires	Jan.–Feb. 2008
Phase 2 of the telephone reminder operation to remind survey coordinators or individual respondents to complete and return the questionnaires	Jan.–Feb. 2008
Phase 2 of the telephone nonresponse follow-up operation to attempt to complete interviews over the telephone with nonrespondents	Feb. 2008
Phase 2 of the field nonresponse follow-up operation for school-level and teacher questionnaires	Feb.–Mar. 2008
Reminder postcards mailed to teachers	Mar. 2008
Replacement questionnaires mailed to all nonresponding teachers	Apr. 2008
Replacement questionnaires mailed to all Bureau of Indian Education-funded schools	Apr. 2008

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 2007–08.

## Details of School Data Collection

### **Mailouts**

The initial school package was mailed to school principals on August 28, 2007. Packages were shipped via the United States Postal Service's (USPS) Priority Mail or First Class Mail.<sup>11</sup> Both the Priority and First Class envelopes were overprinted with the NCES and SASS logos on the left-hand side. The First Class envelope had a border of green triangles to meet postal regulations. The package contained the following:

- a letter to the principal that introduced the survey and requested that the principal designate a survey coordinator;
- a SASS overview brochure, *Schools and Staffing Survey* (NCES 2007-326), providing general information, topics covered in the SASS, and resources available;
- the appropriate NCES booklet—either *A Brief Profile of America's Public Schools* (NCES 2007-379) or *A Brief Profile of America's Private Schools* (NCES 2007-380);
- a CD-ROM of the *Statistical Abstract of the United States: 2007*; and
- an envelope to give to the designated survey coordinator. This envelope contained
  - a letter to the survey coordinator that introduced the survey and provided instructions;
  - the Teacher Listing Form (TLF);
  - the School Questionnaire, Public School Questionnaire (With District Items), or Private School Questionnaire;
  - the Principal Questionnaire or Private School Principal Questionnaire;
  - the School Library Media Center Questionnaire (for public and BIE-funded schools only); and
  - a pre-addressed, postage-paid return envelope for each questionnaire.

A second package of school-level questionnaires was mailed to the survey coordinator, if one had been established, or to the school principal, if a survey coordinator had not been established, on September 24, 2007. These packages only contained questionnaires that had not been received. There were two versions of the cover letter that accompanied this package. The letter for the survey coordinator requested that the questionnaires be distributed to the appropriate staff, collected by the coordinator, and returned to the U.S. Census Bureau as soon as possible; the letter for the principal requested that the questionnaires be distributed to the appropriate staff to complete and return as soon as possible.

Teacher Questionnaires were mailed on a weekly basis as teachers were sampled from the completed Teacher Listing Forms. In schools where a survey coordinator was established, a letter and a teacher package for each of the sampled teachers were mailed to the survey coordinator. Each teacher package included a Teacher Questionnaire, a cover letter, and a pre-addressed, postage-paid return envelope. In schools where a survey coordinator was not established, the teacher packages were mailed directly to the sampled teachers.

A reminder postcard was mailed to survey coordinators in schools that had returned the Teacher Listing Form on October 20, 2007. The postcard thanked the coordinator for the questionnaire(s) that had already been completed and reminded them to have the appropriate staff complete and return the remaining questionnaires. An additional postcard was mailed to both survey coordinators and individual respondents in two waves from December 21, 2007, to January 16, 2008. The postcard to the survey coordinators

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<sup>11</sup> The type of USPS mailing service depended on the weight of the package. Packages that weighed over 13 ounces were sent via Priority Mail; packages that weighed less than 13 ounces were sent via First Class Mail.

thanked them for their help and alerted them that the U.S. Census Bureau would begin following-up with the individual survey respondents. The postcard to the individual respondents reminded them to complete and return their questionnaire.

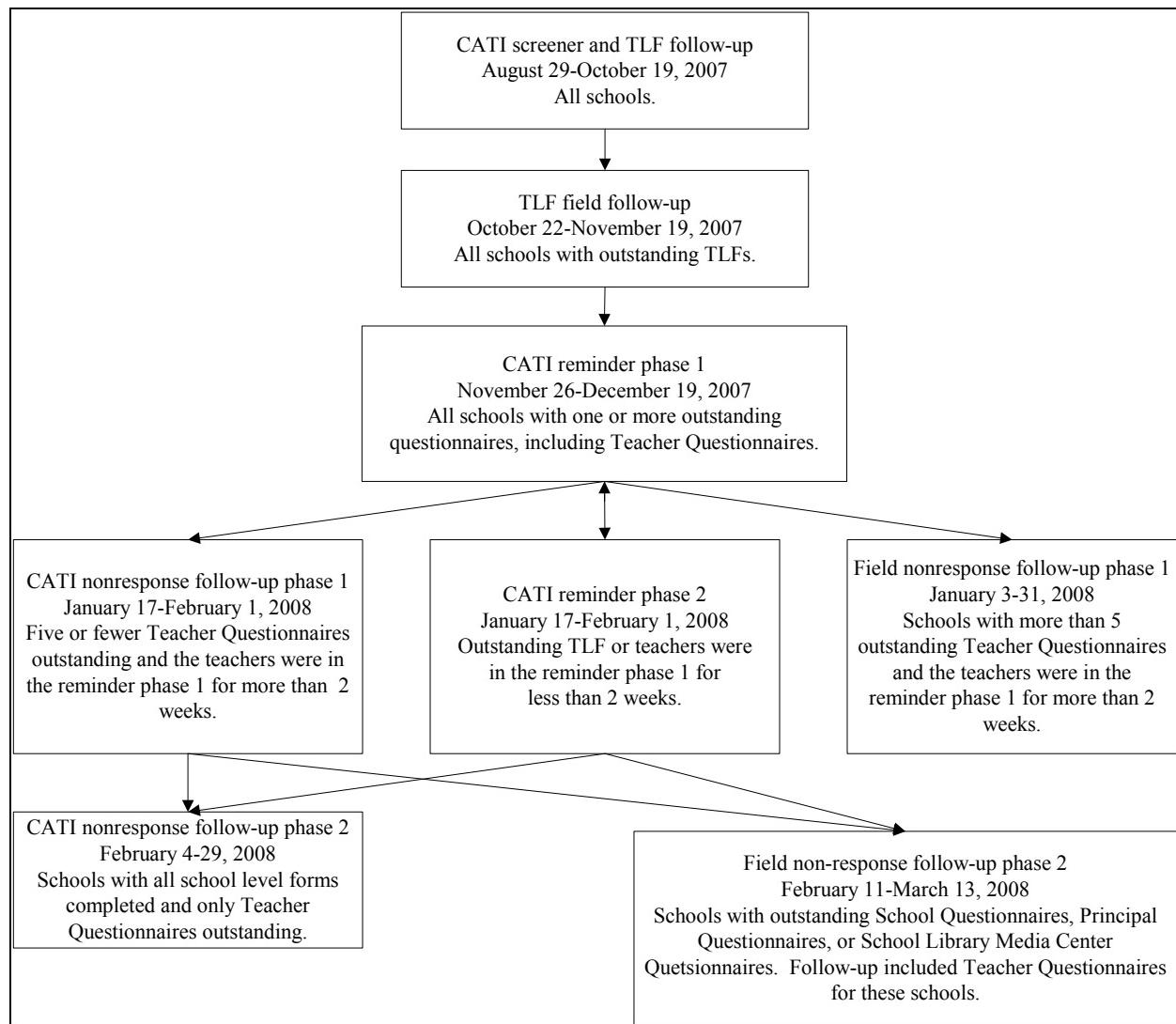
During the CATI reminder operation (discussed in detail in the next section), coordinators and/or individual respondents were able to request a replacement questionnaire if they had not received the previous questionnaire(s), had misplaced it, or had damaged it. The replacement questionnaires were to be mailed within 3 to 5 days of the request; however, there were problems with the automated re-mail request application and this did not occur. (The automated re-mail request application is discussed in more detail in the Evaluation of Methodology section later in this chapter.) A replacement questionnaire was sent to all nonrespondents between January 10 and January 14, 2008, in lieu of mailing questionnaires to targeted nonrespondents as requested.

A reminder postcard was sent to all nonresponding teachers on March 12, 2008. The postcard was originally intended to serve as a reminder prior to field follow-up with nonresponding teachers; however, the last phase of field follow-up was cancelled because teacher response rates were higher than expected and the potential benefit in terms of increased response rates did not outweigh the cost. A questionnaire was mailed to all nonresponding teachers between April 11 and April 16, 2008, in lieu of field follow-up.

Toward the end of data collection, a final effort was made to increase the response rates for schools funded by the Bureau of Indian Education (BIE). Replacement questionnaires were mailed to all nonresponding BIE-funded schools on April 16, 2008, with a letter from the Acting Director of the Bureau of Indian Education encouraging the schools to participate.

## **Telephone and Field Follow-up Operations**

Trained telephone interviewers and/or field representatives contacted survey coordinators and individual respondents during the data collection process. The telephone and field follow-up operations depended upon the type and quantity of outstanding questionnaires. Each operation is described in detail in the following sections. Exhibit 2 shows how cases flowed from one operation to the next. Each box contains the name of the follow-up operation, the dates when it was conducted, and the criteria used to determine the cases included.

**Exhibit 2. Data collection follow-up operations: 2007–08 SASS**

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 2007–08.

### **Computer-Assisted Telephone Interviewing Screener and Teacher Listing Form Follow-up Operation**

The CATI screener and Teacher Listing Form (TLF) follow-up operation was conducted by two of the U.S. Census Bureau's telephone centers—the Jeffersonville Telephone Center (JTC) in Jeffersonville, Indiana, and the Tucson Telephone Center (TTC) in Tucson, Arizona—from August 29 through October 19, 2007. The letter included in the initial mailing requested that the principal or designated survey coordinator call the U.S. Census Bureau by September 7, 2007. Both telephone centers accepted incoming telephone calls in response to the letter prior to making telephone calls beginning on September 8, 2007.

The screener instrument was used to ascertain whether a school was in-scope or out-of-scope for SASS, verify that the package of questionnaires was received, and establish a survey coordinator. The screening section of the SASS screener instrument verified the school name, address, school type, and grade range in order to determine if the school was in-scope.

The interviewer first asked whether the school's type (i.e., public or private) matched the type that was pre-filled in the instrument. If the school's type was not as expected, the interviewer provided the respondent with six categories from which to choose: public, private, public charter, Bureau of Indian Education (BIE), homeschool, or only web-based instruction.<sup>12</sup> Public charter and BIE-funded schools were considered public schools. Homeschools and schools with only web-based instruction were considered out-of-scope for SASS. If the "public" or "private" designation was incorrect, the school was coded as out-of-scope.

The instrument also prompted the interviewer to verify grade ranges to confirm that the school in question was the correct school. If the grade range differed entirely from the expected grade range (i.e., the actual grade range did not overlap with the expected grade range), then the instrument collected the information and referred the case to the sampling frame staff. The sampling frame staff checked the source files to determine whether the school was in-scope or out-of-scope. If the respondent reported that the grade range of the school differed significantly from the preloaded grade range from the sampling process, then there was a possible problem. In situations where the reported grade range was significantly less than expected, the instrument presented questions to find out if the anticipated grade range was covered by more than one school in the local community. These situations could arise due to an error in the source file or because the original sampled school was split into two or more schools. Once the information for these additional schools was entered, the instrument randomly selected ONE of the schools as the in-scope school for the survey. In those cases, the instrument instructed the interviewer how to proceed. In situations where the reported grade range was significantly more than expected, the instrument presented a question to probe for a reason. For example, the school of interest may have merged with another school or the source file may have been incorrect. In either instance, the school remained in-scope. If the grade range differed by no more than one grade at either end of the range (e.g., a school with grades 3–5 was reported as having grades 2–5), then the instrument simply collected the new grade range of the school.

If the school met the out-of-scope criteria, then all of the questionnaires associated with the school were out-of-scope. If, on the other hand, the school was determined to be eligible for the survey, then the interviewer, using the Web-based CATI system, led the respondent through a series of questions to verify that the package had been received and to establish a survey coordinator. In cases where interviewers were unable to establish a survey coordinator, they attempted to establish a TLF contact person.

The interviewer stressed the importance of returning the TLF as soon as possible to the survey coordinator or TLF contact person. After the school was screened, the interviewer called the survey coordinator, TLF contact person, or another knowledgeable respondent at schools that had not returned a TLF to remind them to complete and return it. Interviewers offered to complete the TLF over the telephone with the respondent or fax them a replacement form that could be completed and returned via fax.

Interviewers used the screener instrument and the Web-based CATI system to update the school's information, if necessary, record the survey coordinator's or TLF contact person's name, enter the appropriate outcome code for the call, and record any applicable notes.

### ***Teacher Listing Form Field Follow-up Operation***

The Teacher Listing Form (TLF) field follow-up operation was originally scheduled for October 29 through November 16, 2007; however, it was rescheduled for October 22 through November 19, 2007, to

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<sup>12</sup> Definitions of school types are provided in "Appendix A. Key Terms for SASS." Homeschools are not included in SASS. Organizations or institutions that provide support for homeschooling but do not offer classroom instruction for students also are not included.

allow more time for the field staff to work with the school staff to collect completed TLFs. Trained field representatives contacted survey coordinators or other knowledgeable respondents by telephone and/or personal visit. A replacement TLF was provided to field representatives for each school in their workload in case the respondent needed another form. Field representatives could either wait at the school for the respondent to complete the TLF, leave a return envelope with the respondent, or make an appointment to pick-up the completed TLF. Field representatives offered reluctant respondents, especially those in large schools, the option of providing a printed roster of teachers and annotating the list with the other requested information (i.e., subject matter taught, teaching status, teaching experience, and expected teaching status for the following school year) rather than completing the TLF.

### **CATI Reminder Operations**

The CATI reminder operations were conducted by the JTC and the TTC in two phases. Phase 1 of the CATI reminder operation was conducted from November 26 through December 19, 2007. Phase 2 was scheduled for January 3 through 17, 2008; however, it was rescheduled for January 17 through February 1, 2008, due to a delay in mailing replacement questionnaires. All schools with one or more outstanding questionnaires were contacted during phase 1. Interviewers began asking about the status of the Teacher Questionnaires approximately 2 weeks after they were mailed. Phase 2 included schools that had not returned the Teacher Listing Form or that had sampled teachers that had not been in phase 1 of the reminder operation for at least 2 weeks. Schools that did not meet either of these criteria moved on to either CATI nonresponse follow-up or field follow-up.

During the reminder operations, interviewers contacted the survey coordinator to determine the status of all outstanding questionnaires and to remind the coordinator to have the appropriate staff complete and return them as soon as possible. If a survey coordinator had not been established during the screener operation, interviewers contacted the individual respondents. Interviewers updated the status of questionnaires (e.g., respondent will mail, respondent has mailed, etc.) in the Web-based CATI system after each contact. Interviewers accepted and submitted re-mail requests for respondents who needed replacement questionnaires.

### **CATI Nonresponse Follow-up Operations**

The CATI nonresponse follow-up operations were conducted by the JTC and the TTC in two phases. Phase 1 was scheduled for January 3 through 17, 2008; however, it was rescheduled for January 17 through February 1, 2008, due to a delay in mailing replacement questionnaires. Phase 2 of the CATI nonresponse follow-up operation was scheduled for January 20 through February 15, 2008; however, it was rescheduled for February 4 through 29, 2008, due to the delay in the previous follow-up operations. Schools with sampled teachers that had been in phase 1 of the reminder operation for at least 2 weeks and that had five or fewer outstanding Teacher Questionnaires were included in phase 1. Schools that had returned the school-level questionnaires but had outstanding Teacher Questionnaires were contacted during phase 2. Interviewers attempted to contact the individual survey respondents<sup>13</sup> to complete the appropriate questionnaire over the telephone. Interviewers documented the outcome of each telephone call in the Web-based CATI system.

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<sup>13</sup> Interviewers tried to speak with the library media specialist or librarian for the School Library Media Center Questionnaire, the principal for the Principal Questionnaire or Private School Principal Questionnaire, a knowledgeable respondent for the School Questionnaire, Private School Questionnaire, or Public School Questionnaire (With District Items), and the sampled teacher for the Teacher Questionnaire or Private School Teacher Questionnaire.

### **Field Nonresponse Follow-up Operations**

Three phases of field nonresponse follow-up were planned; however, the third phase was cancelled. Phase 1 of the field nonresponse follow-up operation was conducted from January 3 through 31, 2008. Phase 2 of the field nonresponse follow-up operation was scheduled for February 1 through 28, 2008; however, it was rescheduled for February 11 through March 13, 2008, due to the delay in the previous follow-up operations. Schools were included in phase 1 if they had more than five outstanding Teacher Questionnaires and the teachers had been in phase 1 of the reminder operation for at least 2 weeks. Schools were included in phase 2 if one or more of their school-level questionnaires were outstanding; however, if there were outstanding Teacher Questionnaires at these schools, the teachers were included in this operation as well.

During the field nonresponse follow-up operations, trained field representatives contacted survey coordinators and individual respondents via telephone calls and/or personal visits to determine the status of all outstanding questionnaires and to urge the respondents to participate. Field representatives were given a package of labeled questionnaires for each school in their workload so that they could provide replacement questionnaires if respondents had not received, had misplaced, or had damaged their questionnaires. Field representatives made additional contacts via telephone calls and/or personal visits to obtain completed questionnaires or to verify that they had been mailed. Each time field representatives contacted a school, they updated the outcome code and entered any applicable notes in the case management system on their laptop computer.

Phase 3 of the field nonresponse follow-up operation was scheduled for March 25 through April 30, 2008; however, it was rescheduled for April 8 through May 14, 2008, and ultimately was cancelled because teacher response rates were higher than expected and the potential benefit in terms of increased response rates did not outweigh the cost of field follow-up. The operation was intended to focus on collecting remaining Teacher Questionnaires from teachers who had not been contacted in either phase 1 or phase 2 of the field nonresponse follow-up operations. A reminder letter with a replacement questionnaire was mailed to all nonresponding teachers in lieu of this operation.

Returned questionnaires continued to be accepted by mail through June 2008.

### **Response Rates**

Table 23 shows the unweighted field response rates of each questionnaire by month. These rates differ from the unweighted final response rates as those were determined after the data were edited and completeness checks were performed.

**Table 23. Cumulative unweighted field response rates (in percent) during data collection, by date and questionnaire: 2007–08**

Questionnaire	Field response rates achieved by various dates								
	10/2/07	11/1/07	12/4/07	1/8/08	2/5/08	3/4/08	4/1/08	5/6/08	6/3/08
Principal Questionnaire	19.9	47.8	53.6	57.1	65.5	74.6	81.2	81.5	81.5
Private School Principal Questionnaire	17.9	42.3	48.2	50.9	57.7	68.1	74.8	75.1	75.1
School Questionnaire	15.6	44.3	51.1	54.8	63.0	72.5	80.2	80.5	80.5
Private School Questionnaire	14.3	41.7	47.7	51.3	57.3	67.7	76.0	76.7	76.7
Public School Questionnaire (With District Items) (all)	16.2	45.5	52.1	55.2	64.6	73.9	81.4	82.1	82.1
Public School Questionnaire (With District Items) (BIE-funded schools only <sup>1</sup> )	8.9	35.9	40.6	44.1	53.8	65.7	75.4	76.6	77.8
School Library Media Center Questionnaire	18.9	46.2	52.9	56.9	65.7	76.1	78.3	83.0	83.0
Public Teacher Listing Form	29.4	67.0	85.4	85.9	86.3	86.6	86.7	86.7	86.7
Private Teacher Listing Form	26.9	63.8	81.9	82.4	82.6	83.2	83.3	83.3	83.3
Teacher Questionnaire	0.0	6.6	26.7	51.5	68.7	79.7	83.7	85.5	86.3
Private School Teacher Questionnaire	0.0	6.5	29.9	48.9	62.3	74.0	78.1	79.7	80.2

<sup>1</sup> BIE refers to the Bureau of Indian Education.

NOTE: The response rates for the Teacher Questionnaire and Private School Teacher Questionnaire were calculated based on the number of teachers that had been sampled by each date. The total teacher sample was drawn by 3/3/08; therefore, response rates beginning on 3/4/08 reflect the response rate for all sampled teachers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "School Control Database," 2007–08.

## Evaluation of Methodology

As noted, the 2007–08 SASS utilized a primarily mail-based data collection strategy with telephone and field follow-up operations. There were elements of the data collection methodology that were successful as well as elements that had a few glitches that either need to be improved upon or completely re-thought.

The 2007–08 SASS methodology incorporated telephone operations that were conducted in two of the U.S. Census Bureau's telephone centers. The centralized nature of the operations allowed both project staff and the interviewers' direct supervisors to closely monitor the telephone calls to ensure that the interviewers were following the proper procedures and using the provided text. This led to an increased level of consistency in the way contact was made with survey respondents between schools, states, and regions. It is recommended that future administrations of SASS incorporate centralized telephone operations to screen and remind schools and individual respondents.

Another design feature of the 2007–08 SASS methodology that worked well was establishing a survey coordinator at the school. Having a survey coordinator improved the efficiency of data collection operations by enabling telephone interviewers and/or field representatives to contact one person at the school regarding the status of all of the school's questionnaires. It is recommended that future administrations of SASS incorporate survey coordinators as the 2005–06 SASS pretest (see chapter 3) demonstrated that having survey coordinators results in a higher response rate among teachers and a larger percentage of schools that returned all of their questionnaires.

During the 2007–08 SASS data collection, field follow-up of the Teacher Listing Form (TLF) was conducted in the fall independently of follow-up operations for the remaining school-level and teacher questionnaires. Following-up on the TLF in the fall independently of other forms resulted in receiving the majority of TLFs by late November 2007. This allowed sufficient time for teachers to be sampled and questionnaires to be mailed so that nonresponding teachers could be contacted in the reminder and telephone nonresponse follow-up operations prior to being contacted by field representatives. Response rates for teacher questionnaires were higher than anticipated, allowing the third phase of field nonresponse follow-up, which was intended to follow-up with nonresponding teachers, to be cancelled. Future administrations of SASS should continue to focus on receiving the TLF in the fall.

A unique feature of the 2007–08 SASS methodology was the way that cases flowed into the various follow-up operations. Rather than having all schools in the same type of follow-up operation at the same time, schools flowed into the operations depending on the status of one or more of their questionnaires. This flexibility increased the effectiveness and the efficiency of the follow-up operations. Schools with sampled teachers did not move into a nonresponse follow-up operation until the teachers had been in the reminder operation for at least 2 weeks, allowing time for the survey coordinator to work with the teacher to send in a completed questionnaire. Schools with more than five outstanding Teacher Questionnaires proceeded directly to field nonresponse follow-up rather than the telephone nonresponse follow-up operations. This approach worked better for the schools with a high number of outstanding forms as these schools are often large and located in urban areas and it can be difficult to reach the appropriate staff members by phone. An important characteristic was that schools moved into follow-up operations as a comprehensive unit (i.e., as the school moved into an operation, all of the forms for that school moved to the operation). Schools were only included in one follow-up operation at a time, eliminating the potential problems associated with having multiple staff members (i.e., telephone interviewers and field representatives) following-up with school staff during the same time period. Future SASS administrations should continue to have schools flow into follow-up operations based on the status of the questionnaires and should ensure that schools are only included in one follow-up operation at a time.

During the CATI screener and Teacher Listing Form (TLF) follow-up operation, interviewers offered to fax a copy of the TLF to the coordinator or designated respondent. The respondent could then complete the faxed TLF and fax it back to the National Processing Center (NPC) rather than return it by mail. Faxes were to be sent using the Paperless Fax Image Reporting System (PFIRS), an automated system that provided high-speed outbound facsimile transmissions to schools that requested a faxed copy of the TLF. The system labeled an electronic version of the TLF with the barcode, school control number, contact name, school name, grade range, address, and expected number of teachers. This was expected to be a much more efficient way of providing replacement TLFs than mailing them or faxing them by hand. Unfortunately, the system malfunctioned and occasionally faxed TLFs to schools multiple times, causing school staff to become frustrated. Staff attempted to correct the problem and were unable to resolve it satisfactorily; therefore, use of PFIRS was suspended on September 23, 2007. All schools were mailed the planned package of replacement questionnaires, including the TLF, on September 24, 2007. If the school requested a replacement form following the second mailing, telephone center staff mailed a labeled copy of the TLF to the school. The replacement TLFs were mailed directly from the telephone centers because they already had a labeled TLF for each school. Telephone center staff made a copy of each TLF that they mailed so that they would have a form to use if the respondent later elected to complete the form over the phone. Sending the TLFs from the telephone center eliminated the additional time that would have been necessary for replacement TLFs to be labeled and mailed from the NPC. The use of PFIRS is not recommended for future iterations of SASS because the reason that some schools received multiple faxes cannot be identified or confirmed. Other technologies should be reviewed to determine whether they are acceptable for SASS. If other technologies are not available or deemed acceptable, replacement TLFs should be mailed to survey respondents.

There was also a problem with a second automated process. During the CATI reminder operations, survey coordinators or individual respondents were able to request replacement questionnaires. Interviewers could enter the requests into an automated re-mail request application. This application generated a file of re-mail requests daily that could be used by the NPC to label and mail replacement questionnaires. Regrettably, the roll-out of the re-mail application onto the interviewers' computers took longer than anticipated. Following the roll-out of the application, there were several problems with the output files. After several unsuccessful attempts to correct the problems with the system, use of the re-mail application was terminated. Since there was no accessible record of the questionnaires that had been requested, a blanket mailout of all outstanding questionnaires was conducted in January 2008. If the re-mail request application is used for future iterations of SASS, enough time should be allocated in the schedule for increased testing.

## Chapter 6. Response Rates

This chapter presents the survey response rates for the 2007–08 SASS. First, the unit response rates are presented in detail. Next, the item response rates for each survey type are summarized. Following these sections, the nonresponse bias analyses that were conducted on both the unit and the items for this SASS are described, and major findings are presented.

### Survey Response Rates

Unit response rates are the rate at which the sampled units respond by substantially completing the questionnaire. Unit response rates can be calculated as unweighted or weighted. The unweighted response rates are the number of interviewed sampled units divided by the number of eligible (in-scope) sampled units, which include respondents plus nonrespondents but not ineligible (out-of-scope) units. The weighted response rates are the base-weighted number of interviewed cases divided by the base-weighted number of eligible cases. The base weight for each sampled unit is the product of the initial basic weight and the sampling adjustment factor. See chapter 9 for further discussion of the weighting.

The unweighted, weighted, and weighted overall (across all stages of selection, in the case of teachers) response rates for each data file and the Teacher Listing Forms are listed in table 24. The geographic variation in response rates can be examined by looking at each state's response rate. Table 25 provides public school response rates by state for districts, schools, principals, teachers, and school library media centers. Table 26 provides private school response rates by private school affiliation for schools, principals, and teachers. The response rate tables are useful as an indication of possible nonresponse bias. The unweighted response rates provide a general indication of the success of the data collection effort while the weighted response rates provide a measure of the quality of the data and the potential for nonresponse bias.

**Table 24. Unweighted and base-weighted response rates and weighted overall response rates in percent, by survey population: 2007–08**

Survey population	Unweighted response rate	Weighted response rate	Weighted overall response rate <sup>1</sup>
Public school Teacher Listing Form	86.70	86.17	†
Private school Teacher Listing Form	83.25	85.09	†
BIE school Teacher Listing Form	87.28	87.28	†
School district	89.62	87.78	†
Public school	80.51	80.36	†
Private school	74.38	75.91	†
BIE school	77.06	77.06	†
Public school principal	79.49	79.36	†
Private school principal	71.98	72.18	†
BIE school principal	79.17	79.17	†
Public school teacher	83.95	84.03	72.41
Private school teacher	77.23	77.47	65.92
BIE school teacher	80.70	81.82	71.41
Public school library media center	82.31	81.68	†
BIE school library media center	78.85	78.85	†

† Not applicable.

<sup>1</sup> Weighted questionnaire response rate times the weighted response rate for the Teacher Listing Form.

NOTE: BIE refers to the Bureau of Indian Education. Response rates were weighted using the product of the initial basic weight and the sampling adjustment factor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form, Private School Teacher Listing Form, and BIE School Teacher Listing Form Data Files, and Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, BIE School Library Media Center Documentation Data Files,” 2007–08.

**Table 25. Base-weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state: 2007–08**

State	District	Schools	Principals	Teachers			Overall teacher response rate <sup>1</sup>	School library media centers
				Teacher Listing Form (TLF)	Teacher Questionnaire	Overall teacher response rate <sup>1</sup>		
Total	87.78	80.35	79.36	86.23	84.03	72.46	81.67	
Alabama	98.27	97.75	93.91	100.00	93.36	93.36	99.18	
Alaska	90.23	75.12	74.10	85.67	73.96	63.36	74.10	
Arizona	78.01	77.69	76.35	87.72	83.80	73.51	81.92	
Arkansas	89.29	86.33	85.99	96.24	86.24	83.00	88.74	
California	83.05	76.00	71.90	83.14	76.21	63.36	74.78	
Colorado	93.10	78.20	76.33	81.69	79.03	64.56	82.43	
Connecticut	83.50	64.17	66.04	76.35	80.46	61.43	70.56	
Delaware	73.95	78.37	76.13	88.26	83.73	73.90	80.00	
District of Columbia	63.82	74.48	71.62	90.15	69.57	62.72	74.41	
Florida	100.00	84.14	82.10	89.31	80.98	72.32	87.30	
Georgia	95.27	90.76	87.77	86.54	91.91	79.54	91.38	
Hawaii	100.00	85.75	86.23	91.05	85.12	77.50	88.80	
Idaho	80.38	83.83	82.00	90.14	86.55	78.02	83.84	
Illinois	87.16	87.24	85.46	94.36	89.82	84.75	87.76	
Indiana	92.65	83.92	85.03	91.89	83.61	76.83	86.29	
Iowa	98.09	83.50	82.17	91.32	88.83	81.12	83.02	
Kansas	94.89	85.83	86.35	93.60	88.20	82.56	85.75	
Kentucky	88.93	84.80	82.47	87.13	89.87	78.30	86.51	
Louisiana	96.66	83.74	88.44	92.15	86.44	79.65	85.41	
Maine	86.56	83.17	84.12	89.82	86.15	77.38	82.15	
Maryland	92.00	58.66	57.50	63.23	79.09	50.01	54.59	
Massachusetts	75.03	77.82	76.05	83.88	82.82	69.47	78.39	
Michigan	80.64	68.78	70.84	81.69	78.99	64.53	71.22	
Minnesota	89.00	86.69	83.48	95.12	81.63	77.65	81.83	
Mississippi	97.75	95.73	89.97	98.86	92.13	91.08	96.13	
Missouri	97.18	87.50	87.82	92.54	88.52	81.92	87.59	
Montana	93.99	92.02	85.21	94.53	89.00	84.13	93.38	
Nebraska	86.72	77.04	77.81	80.97	89.44	72.42	77.06	
Nevada	97.43	79.51	74.89	85.69	81.41	69.76	75.32	
New Hampshire	80.57	89.05	89.90	88.94	87.84	78.12	91.10	
New Jersey	82.31	70.46	71.11	72.56	77.30	56.09	71.38	
New Mexico	82.81	76.23	77.53	85.56	77.80	66.57	78.14	
New York	81.77	73.69	77.98	80.11	81.31	65.14	76.86	
North Carolina	86.77	82.84	77.35	87.82	89.42	78.53	86.17	
North Dakota	86.79	85.58	84.97	91.09	90.39	82.34	87.05	

See notes at end of table.

**Table 25. Base-weighted response rates in percent for public school districts, schools, principals, teachers, and school library media centers, by state: 2007–08—Continued**

State	District	Schools	Principals	Teachers			Overall teacher response rate <sup>1</sup>	School library media centers
				Teacher Listing Form (TLF)	Teacher Questionnaire	Overall teacher response rate <sup>1</sup>		
Ohio	87.59	82.85	81.03	87.72	85.59	75.08	84.24	
Oklahoma	89.66	89.06	88.16	96.06	89.30	85.78	86.81	
Oregon	91.41	73.45	68.16	82.85	75.88	62.87	73.57	
Pennsylvania	90.69	81.25	78.70	83.29	87.27	72.69	80.91	
Rhode Island	84.76	74.48	70.23	84.01	68.26	57.35	72.77	
South Carolina	95.75	87.23	87.10	92.85	91.55	85.00	90.90	
South Dakota	84.11	86.76	86.61	91.67	87.44	80.16	82.68	
Tennessee	94.62	79.99	78.88	82.15	91.83	75.44	83.41	
Texas	92.10	77.80	78.85	84.89	81.52	69.20	82.76	
Utah	81.12	78.66	78.83	80.91	86.02	69.60	72.90	
Vermont	80.42	87.25	83.67	94.31	81.85	77.19	91.13	
Virginia	98.04	75.58	74.90	76.30	86.80	66.23	76.21	
Washington	88.49	76.49	77.66	85.34	82.78	70.64	77.65	
West Virginia	96.82	92.62	89.95	96.98	86.90	84.28	93.02	
Wisconsin	93.06	89.93	90.65	90.68	88.24	80.02	93.93	
Wyoming	90.13	87.77	85.73	92.36	83.77	77.37	85.00	

<sup>1</sup> Weighted questionnaire response rate times the weighted response rate for the Teacher Listing Form.

NOTE: Response rates were weighted using the product of the initial basic weight and the sampling adjustment factor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form Data File, and Public School District, Public School, Public School Principal, Public School Teacher, Public School Library Media Center Documentation Data Files,” 2007–08.

**Table 26. Base-weighted response rates in percent for private schools, principals, and teachers, by affiliation stratum: 2007–08**

Affiliation stratum	Schools	Principals	Teachers		Overall teacher response rate <sup>1</sup>
			Teacher Listing Form (TLF)	Teacher Questionnaire	
All private schools	75.91	72.17	85.28	77.46	66.06
Catholic					
Parochial	77.50	80.35	88.69	81.31	72.11
Diocesan	81.83	81.94	90.05	83.91	75.56
Private order	76.95	81.93	87.42	78.50	68.62
Baptist	74.32	70.30	80.55	74.77	60.23
Jewish	56.31	50.91	65.34	56.47	36.90
Lutheran	91.10	82.19	96.07	85.32	81.97
Seventh-day Adventist	86.22	80.19	99.06	75.68	74.97
Other religious	72.63	65.76	82.20	75.68	62.21
Nonsectarian					
Regular program	66.21	60.42	80.65	75.81	61.14
Special emphasis	77.76	75.03	87.43	70.89	61.98
Special education	81.27	74.97	86.33	79.25	68.42

<sup>1</sup> Weighted questionnaire response rate times the weighted response rate for the Teacher Listing Form.

NOTE: Response rates were weighted using the product of the initial basic weight and the sampling adjustment factor.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS),

“Private School Teacher Listing Form Data File, and Private School, Private School Principal, and Private School Teacher Documentation Data Files,” 2007–08.

## Item Response Rates

Item response rates indicate the percentage of respondents that answered a given survey question, or item. Weighted item response rates are produced by dividing the number of sampled cases responding to an item by the number of sampled cases eligible to answer the item and adjusted by either the base or final weight. The base weight for each sampled unit is the product of the initial basic weight and the sampling adjustment factor. The final weight for each sampled unit is the base weight adjusted for unit nonresponse and then ratio adjusted to the frame total. See chapter 9 for further discussion of the weighting.

For most items, a counted response is any item that is not missing and the value of the associated imputation flag is 0. The exception to this are the ratio-adjusted items, which include the student race items on the district (d0277–d0281) and school questionnaires (s0042–s0046), the teacher race items on the district (d0290–d0294) and school questionnaires (s0122–s0126), the special education instructional settings items on the school questionnaires (s0203–s0206), and the 3<sup>rd</sup> grade (a0174–a0183) and 8<sup>th</sup> grade (a0187–a0191) minutes items on the principal questionnaires. For these items, a counted response is any item that is not missing and the value of the associated imputation flag is 0 or 1. See chapter 8 for detailed information on imputations.

For the SASS, both the base and final-weighted item response rates ranged from 0 percent to 100 percent. For all 12 SASS data files, between 85.8 and 98.2 percent of the items had a base-weighted response rate of 85 percent or higher, and between 86.3 and 98.2 percent of the items had a final-weighted response rate of 85 percent or higher.

Items with a base-weighted response rate of less than 70 percent were those that were applicable to a small subpopulation on the data file because of skip patterns. For example, item 65 from the Public School Questionnaire (With District Items) that appears on the BIE School Data File has a base-weighted response rate of 57.1 percent. This item asks BIE schools that identified themselves as public charter schools to indicate the year in which the school began providing instruction as a public charter school. Only 7 cases identified themselves as a public charter school and, therefore, were eligible to answer item 65. Similarly, the item on the BIE School Teacher Data File with a 0 percent base and final-weighted response rate occurred because only one individual was eligible to respond to that answer and that potential respondent did not provide data for that item.

Table 27 provides a brief summary of the base-weighted item response rates, and exhibit 3 provides information about the SASS items that have a base-weighted response rate below 70 percent. Similarly, Table 28 provides a brief summary of the final-weighted item response rates, and exhibit 4 provides information about the SASS items that have a final-weighted response rate below 70 percent.

**Table 27. Summary of base-weighted item response rates, by survey population: 2007–08**

Survey population	Range of item response rates	Percent of items with a response rate of 85.0 percent or more	Percent of items with a response rate of 70.0–84.9 percent	Percent of items with a response rate of less than 70.0 percent
School district	83.2–100	97.9	2.1	0
Public school	80.5–100	95.2	4.8	0
Private school	67.8–100	88.3	11.3	0.4
BIE school	57.1–100	85.8	12.3	1.9
Public school principal <sup>1</sup>	78.3–100	99.4	0.6	0
Private school principal <sup>1</sup>	67.1–100	98.0	1.3	0.7
BIE school principal <sup>1</sup>	67.7–100	98.2	1.2	0.6
Public school teacher	45.5–100	91.4	5.1	3.5
Private school teacher	62.5–100	90.0	8.1	1.9
BIE school teacher <sup>2</sup>	0–100	86.8	10.1	3.1
Public school library media center	83.5–100	95.1	4.9	0
BIE school library media center	79.2–100	93.4	6.6	0

<sup>1</sup> Item 30 on the principal questionnaires was dropped from data processing due to poor data quality and is not included in the item response rate summary information provided in this table.

<sup>2</sup> The zero response rate resulted from one item where the only eligible respondent did not answer the item; the next lowest response rate was 23.7 percent.

NOTE: BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

**Exhibit 3. Items with base-weighted response rates of less than 70 percent, by survey population: 2007–08**

Survey population	Items
School survey	
Private	64
BIE	61_PK, 65, 66B, 66C
Principal survey	
Private	34
BIE	36
Teacher survey	
Public	22(8)_code, 22(8)_grade, 22(8)_students, 22(9)_code, 22(9)_grade, 22(9)_students, 22(10)_code, 22(10)_grade, 22(10)_students
Private	22(10)_code, 22(10)_grade, 22(10)_students, 33J(1)_code, 35H
BIE	4, 34G(1)_code, 34G(2), 34H, 34I(1)_code, 34I(2), 34K(1)_code, 34K(2)

NOTE: Numbers in this table refer to questionnaire item numbers, while letters or parenthetical descriptions refer to sub-items. For example, item 66B refers to sub-item B of item 66 on the Public School Questionnaire (With District Items). BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, BIE School, Private School, BIE School Principal, Public School Teacher, BIE School Teacher, and Private School Teacher Documentation Data Files,” 2007–08.

**Table 28. Summary of final-weighted item response rates, by survey population: 2007–08**

Survey population	Range of item response rates	Percent of items with a response rate of 85.0 percent or more	Percent of items with a response rate of 70.0–84.9 percent	Percent of items with a response rate of less than 70.0 percent
School district	82.8–100	97.9	2.1	0
Public school	80.3–100	95.2	4.8	0
Private school	68.0–100	87.9	11.3	0.8
BIE school	58.3–100	86.3	11.8	1.9
Public school principal <sup>1</sup>	78.0–100	98.8	1.2	0
Private school principal <sup>1</sup>	66.0–100	98.0	1.3	0.7
BIE school principal <sup>1</sup>	68.1–100	98.2	1.2	0.6
Public school teacher	43.4–100	91.1	5.4	3.5
Private school teacher	61.1–100	89.3	8.9	1.8
BIE school teacher <sup>2</sup>	0–100	87.9	9.0	3.1
Public school library media center	83.9–100	96.7	3.3	0
BIE school library media center	77.1–100	91.8	8.2	0

<sup>1</sup> Item 30 on the principal questionnaires was dropped from data processing due to poor data quality and is not included in the item response rate summary information provided in this table.

<sup>2</sup> The zero response rate resulted from one item where the only eligible respondent did not answer the item; the next lowest response rate was 30.3 percent.

NOTE: BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

**Exhibit 4. Items with final-weighted response rates of less than 70 percent, by survey population: 2007–08**

Survey population	Items
School survey	64, 65D
	BIE
Principal survey	61_PK, 65, 66B, 66C
	Private
BIE	34
	36
Teacher survey	
	Public
Private	22(8)_code, 22(8)_grade, 22(8)_students, 22(9)_code, 22(9)_grade, 22(9)_students, 22(10)_code, 22(10)_grade, 22(10)_students
	22(10)_code, 22(10)_grade, 22(10)_students, 33J(1)_code, 35H
BIE	4, 34G(1) code, 34G(2), 34H, 34I(1) code, 34I(2), 34K(1) code, 34K(2)

NOTE: Numbers in this table refer to questionnaire item numbers, while letters or parenthetical descriptions refer to sub-items. For example, item 66B refers to sub-item B of item 66 on the Public School Questionnaire (With District Items). BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, BIE School, Private School, BIE School Principal, Public School Teacher, BIE School Teacher, and Private School Teacher Documentation Data Files,” 2007–08.

## Nonresponse Bias Analysis

A comprehensive nonresponse bias analysis was conducted for each of the components of the 2007–08 SASS. The analysis evaluated the extent of potential bias introduced by nonresponse from school districts, schools, school principals, teachers, and school library media centers at both the unit and item levels.

### Unit-Level Nonresponse

#### Overview of Methodology

The first step in conducting the bias analysis was to examine the overall response rate for each data file by state or affiliation stratum and the reporting characteristics (e.g., locale, school level, and enrollment). If the response rate fell below 50 percent, that population would not be reported separately in a published table. Instead, the data would be replaced with a double dagger, but the estimates would be included in the total. The footnote would read, “Reporting standards not met. The base-weighted unit response rate was below 50 percent.” For any state or affiliation stratum where the response rate was less than 85 percent, a more detailed analysis was done on the other reporting characteristics. The results were highlighted if that particular cell had a significantly higher or lower response rate than the file as a whole and bolded if the difference was noteworthy. A noteworthy difference had to meet the following conditions:

- The difference relative to the overall response rate, or frame proportion, was greater than 10 percent. Differences of less than 10 percent represent a small potential for bias.

- The absolute difference was greater than one percentage point. In a large survey like SASS, differences less than this may be significant but would represent a small potential for bias.
- The coefficient of variation was less than 15 percent. This criterion removes unstable estimates with large coefficients of variation because uncertainty exists concerning the significance of the difference.
- The cell had at least 30 interviews. In accordance with the central limit theorem, small sample sizes of less than 30 are likely to result in sampling means that differ greatly from the population mean.

In addition, the base-weighted distribution of the characteristics that were available for respondents and nonrespondents (e.g., locale) was compared to the distribution on the sampling frame, which was adjusted as a result of deleting sampled units identified as out-of-scope. As discussed above, significant differences were highlighted and noteworthy cells were bolded. Finally, these same comparisons were analyzed using the final-weighted distributions.

Comparing the overall response rate of each type of respondent to the population distribution helped to identify areas of potential concern. Comparing the base-weighted distribution of the respondents to the adjusted sampling frame helped to identify areas of potential bias for data items prior to the adjustment for nonresponse. This is the primary method of identifying areas of potential bias. Comparisons with the final-weighted distributions allow us to determine if the weighting successfully reduced the apparent bias. For more information on the weighting factors, please see chapter 9.

***Summary of Conclusions.*** Noteworthy cells were found in 10 survey data files and 2 Teacher Listing Form data files. No noteworthy cells were found in two survey data files and one Teacher Listing Form data file. No response rates fell below the acceptable level of 50 percent for any state in the public sector files or for any stratum in the private sector files. Based on the assumption that patterns of nonresponse are relatively constant over time, the results of the 2003–04 SASS bias analysis, which used the same methodology and the same variables, informed the weighting factors (i.e., the nonresponse adjustment factor). Results from the base-weighted comparison and the final-weighted comparison were analyzed and compared in order to evaluate the efficacy of the weighting adjustments in restoring balance to the response distribution. However, the analysis of remaining noteworthy differences following the nonresponse adjustment suggests that this assumption of unchanging patterns may not hold for all reporting characteristics. As shown below for each data file, noteworthy cells in the data files indicate potential sources for bias in the estimates. In each of the tables presented in the subsequent sections, the noteworthy cells are in bold.

### ***Summary for Public School Districts***

The unit response rate for public school districts was 87.8 percent. The more detailed analysis was performed by state and the following characteristics: locale and enrollment. The unit response rate for 16 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 1 out of 249 base-weighted comparisons in the detailed state-level breakdown tables that were significant and noteworthy based upon the previously identified criteria. This base-weighted difference was found in the enrollment categories for New York and is highlighted in table 29.

**Table 29. Base-weighted public school district frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope districts) and standard error		Interviewed sample distribution (adjusted for out-of-scope districts) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>New York</b>					
Locale					
City	0.1615	0.001104	0.0830	0.021592	3.6332
Suburb	0.3327	0.002273	0.3188	0.035853	0.3872
Town	0.1471	0.001005	0.1306	0.026510	0.6222
Rural	0.3587	0.004381	0.4676	0.043710	-2.4805
Enrollment					
0–149	0.0603	0.000412	0.0451	0.038037	0.3979
150–299	0.0687	0.000469	0.0413	0.023970	1.1423
300–449	0.0639	0.000436	0.1199	0.035066	-1.5959
450–599	0.0555	0.000379	0.0496	0.025744	0.2270
600–799	0.0603	0.000412	0.0205	0.015841	2.5119
800–999	0.0663	0.000453	0.0374	0.016539	1.7461
1,000–1,499	0.1555	0.001062	0.1663	0.033834	-0.3176
1,500–1,999	0.1013	0.000692	0.0942	0.024225	0.2930
2,000–2,499	0.0663	0.000453	0.0722	0.018506	-0.3172
2,500–4,999	<b>0.1748</b>	<b>0.001194</b>	<b>0.2623</b>	<b>0.027194</b>	<b>-3.2129</b>
5,000–7,499	0.0392	0.006564	0.0587	0.012490	-1.3818
7,500–9,999	0.0277	0.000189	0.0169	0.005031	2.1450
10,000–24,999	0.0325	0.000222	0.0111	0.003227	6.6337
25,000–99,999	0.0277	0.000189	0.0046	0.000430	49.2430

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District Documentation Data File," 2007–08.

Noteworthy items from the base-weighted comparisons in the 2003–04 SASS bias analysis informed the weighting scheme (i.e., the nonresponse adjustment factor) such as by changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cell. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The detailed analysis of the final-weighted differences found 2 noteworthy cells of 249 possible cells in the detailed state-level breakdown tables. These noteworthy cells were found in the enrollment categories for New York and in rural districts of Arizona (table 30). In addition, the state of Nebraska was noteworthy for its final-weighted distribution. During data collection, it was discovered that Nebraska school districts underwent a major consolidation between the time the sampling frame was created and the SASS data were collected. For this reason, this difference represents a genuine change in the number of operating districts and, therefore, does not represent nonresponse bias.

**Table 30. Final-weighted public school district frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope districts) and standard error		Interviewed sample distribution (adjusted for out-of-scope districts) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Nebraska—overall	0.0272	0.001411	0.0155	0.000940	6.8576
New York					
Locale					
City	0.1615	0.001104	0.1160	0.026127	1.7427
Suburb	0.3327	0.002273	0.3666	0.025444	-1.3274
Town	0.1471	0.001005	0.1451	0.021553	0.0912
Rural	0.3587	0.004381	0.3723	0.028820	-0.4676
Enrollment					
0–149	0.0603	0.000412	0.0368	0.031027	0.7575
150–299	0.0687	0.000469	0.0438	0.024637	1.0124
300–449	0.0639	0.000436	0.1180	0.029379	-1.8430
450–599	0.0555	0.000379	0.0404	0.023307	0.6453
600–799	0.0603	0.000412	0.0167	0.013441	3.2423
800–999	0.0663	0.000453	0.0305	0.015272	2.3449
1,000–1,499	0.1555	0.001062	0.1548	0.031661	0.0229
1,500–1,999	0.1013	0.000692	0.1073	0.028715	-0.2116
2,000–2,499	0.0663	0.000453	0.0823	0.020653	-0.7747
2,500–4,999	<b>0.1748</b>	<b>0.001194</b>	<b>0.2663</b>	<b>0.031835</b>	<b>-2.8732</b>
5,000–7,499	0.0392	0.006564	0.0660	0.011340	-2.0478
7,500–9,999	0.0277	0.000189	0.0198	0.006086	1.3073
10,000–24,999	0.0325	0.000222	0.0131	0.004121	4.7163
25,000–99,999	0.0277	0.000189	0.0042	0.000487	45.0141
Arizona					
Locale					
City	0.4203	0.028834	0.4035	0.036834	0.3573
Suburb	0.0606	0.041181	0.1552	0.038737	-1.6743
Town	0.1460	0.012575	0.1564	0.026341	-0.3539
Rural	<b>0.3731</b>	<b>0.024661</b>	<b>0.2849</b>	<b>0.023038</b>	<b>2.6159</b>
Enrollment					
0–149	0.2950	0.044549	0.3935	0.056399	-1.3713
150–299	0.1950	0.021210	0.1343	0.044666	1.2271
300–449	0.1054	0.008167	0.0530	0.022547	2.1852
450–599	0.0774	0.005137	0.1304	0.051942	-1.0156
600–799	0.0365	0.011232	0.0497	0.023759	-0.5031
800–999	0.0209	0.001388	0.0152	0.006717	0.8278
1,000–1,499	0.0586	0.003888	0.0708	0.016128	-0.7402
1,500–1,999	0.0167	0.001111	0.0075	0.002143	3.8295
2,000–2,499	0.0251	0.001666	0.0181	0.003295	1.8958
2,500–4,999	0.0690	0.004582	0.0473	0.009536	2.0516
5,000–7,499	0.0314	0.002083	0.0264	0.004630	0.9864

See notes at end of table.

**Table 30. Final-weighted public school district frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope districts) and standard error		Interviewed sample distribution (adjusted for out-of-scope districts) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Arizona—Continued					
Enrollment—					
Continued					
7,500–9,999	0.0125	0.000833	0.0081	0.001181	3.0907
10,000–24,999	0.0376	0.002499	0.0298	0.004166	1.6126
25,000–99,999	0.0188	0.001250	0.0158	0.000936	1.9536

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Documentation Data File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for Public Schools**

The overall response rate for public schools was 80.4 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, locale, and enrollment). The overall response rate for 32 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. *The results of this analysis identified 0 out of 416 comparisons in the detailed state-level breakdown tables that were significant and noteworthy based upon the previously identified criteria.*

Among the national-level reporting characteristics, there were significant and noteworthy differences for two of the locale categories: public schools in central cities and public schools in rural areas (table 31). Neither of these enrollment categories was identified as noteworthy and significant within the states.

**Table 31. Base-weighted public school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected reporting characteristics: 2007–08**

Reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Grade level</b>					
Elementary	0.6744	0.0037	0.6819	0.0106	0.6740
Secondary	0.2468	0.0029	0.2419	0.0073	-0.6259
Combined	0.0789	0.0013	0.0762	0.0054	-0.4868
<b>Locale</b>					
Central city	<b>0.2677</b>	<b>0.0028</b>	<b>0.2330</b>	<b>0.0083</b>	<b>-3.9644</b>
Suburban	0.2839	0.0023	0.2731	0.0100	-1.0534
Town	0.1475	0.0020	0.1592	0.0083	1.3802
Rural	<b>0.3009</b>	<b>0.0020</b>	<b>0.3346</b>	<b>0.0115</b>	<b>2.8765</b>
<b>Enrollment</b>					
0–99	0.0983	0.0040	0.0897	0.0088	-0.8963
100–199	0.0868	0.0016	0.0871	0.0058	0.0482
200–499	0.3867	0.0023	0.4083	0.0127	1.6716
500–749	0.2316	0.0007	0.2193	0.0082	-1.4853
750–999	0.0963	0.0004	0.0972	0.0058	0.1544
1,000 or more	0.1003	0.0004	0.0985	0.0046	-0.4052

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Documentation Data File," 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e., the nonresponse adjustment factor), such as by changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found 1 noteworthy cell of 416 possible cells in the state-level table. This noteworthy cell was found in secondary schools in Nebraska (table 32). In addition, at the national level central cities remained noteworthy after the final weight was applied.

**Table 32. Final-weighted public school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out of scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristics					
Grade level					
Elementary	0.6744	0.0037	0.6808	0.0056	0.9712
Secondary	0.2468	0.0029	0.2422	0.0043	-0.8790
Combined	0.0789	0.0013	0.0769	0.0034	-0.5280
Locale					
Central city	<b>0.2677</b>	<b>0.0028</b>	<b>0.2364</b>	<b>0.0082</b>	<b>-3.6215</b>
Suburban	0.2839	0.0023	0.2845	0.0094	0.0588
Town	0.1475	0.0020	0.1550	0.0072	1.0057
Rural	0.3009	0.0020	0.3242	0.0111	2.0569
Enrollment					
0–99	0.0983	0.0040	0.0839	0.0068	-1.8468
100–199	0.0868	0.0016	0.0853	0.0059	-0.2389
200–499	0.3867	0.0023	0.3984	0.0145	0.7981
500–749	0.2316	0.0007	0.2285	0.0096	-0.3196
750–999	0.0963	0.0004	0.1006	0.0059	0.7209
1,000 or more	0.1003	0.0004	0.1033	0.0050	0.6012
Nebraska					
Grade level					
Elementary	0.6411	0.0632	0.6132	0.0676	-0.3012
Secondary	<b>0.1823</b>	†	<b>0.2048</b>	<b>0.0078</b>	<b>2.8879</b>
Combined	0.1766	0.0141	0.1821	0.0170	0.2490
Locale					
Central city	0.1795	†	0.1343	0.0294	-1.5352
Suburban	0.0710	†	0.0670	0.0257	-0.1553
Town	0.2063	0.0030	0.1996	0.0469	-0.1440
Rural	0.5432	0.0640	0.5991	0.0916	0.5008
Enrollment					
0–99	0.3071	0.0640	0.2500	0.0724	-0.5903
100–199	0.1622	†	0.2022	0.0639	0.6262
200–499	0.3906	†	0.4347	0.0731	0.6033
500–749	0.0864	†	0.0665	0.0263	-0.7564
750–999	0.0240	†	0.0235	0.0188	-0.0277
1,000 or more	0.0298	†	0.0231	0.0051	-1.3037

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Documentation Data File," 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for BIE-Funded Schools**

The overall response rate for BIE-funded schools was 77.1 percent. BIE-funded schools were stratified by state groupings: Arizona, New Mexico, South Dakota, and all other states. All four groupings had a response rate of less than 85 percent. For these state groupings, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 0 out of 52 comparisons that were significant and noteworthy based upon the previously identified criteria.

Comparisons of the frame distribution to the base-weighted respondent distribution for the state groupings and reporting characteristics revealed that none were both significant and noteworthy.

The analysis of the final-weighted differences identified 0 out of 52 comparisons that were significant and noteworthy based upon the previously identified criteria.

**Conclusion/Course of Action.** Based on this analysis, evidence of substantial bias was not found.

### **Summary for Private Schools**

The overall response rate for private schools was 75.9 percent, requiring a closer examination of nonresponse on this data file. A more detailed analysis was performed by strata and by the three primary reporting characteristics (i.e., school level, locale, and enrollment). The overall response rate for ten strata (including the area frame) was below 85 percent. For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 2 out of 120 comparisons that were significant and noteworthy in the stratum-level table based upon the previously identified criteria. These differences were found in the Jewish and Nonsectarian—Regular strata (table 33).

Among the national-level reporting characteristics, there was one significant and noteworthy difference between the frame and base-weighted distribution of respondents—for Lutheran schools overall.

**Table 33. Base-weighted private school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Affiliation stratum</b>					
Catholic—parochial	0.13259	0.001887430	0.13955	0.004468000	-1.43521
Catholic—diocesan	0.10311	0.001539062	0.11119	0.003645000	-2.04208
Catholic—private	0.03420	0.000835296	0.03395	0.002009000	0.11486
Baptist	0.06522	0.002435166	0.06032	0.004240000	1.00140
Jewish	0.03142	0.001102350	0.02287	0.002278000	3.37691
Lutheran	<b>0.05894</b>	<b>0.001603830</b>	<b>0.07074</b>	<b>0.003154000</b>	<b>-3.33440</b>
Seventh-day Adventist	0.02790	0.000728993	0.03153	0.002036000	-1.68003
Other religious	0.27388	0.004354534	0.26693	0.008345000	0.73841
Nonsectarian—regular	0.09880	0.003277581	0.09272	0.004469000	1.09619
Nonsectarian—special emphasis	0.07282	0.002853535	0.07135	0.005167000	0.24914

See notes at end of table.

**Table 33. Base-weighted private school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08—Continued**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Affiliation stratum—Continued					
Nonsectarian—special education	0.04542	0.001884298	0.04740	0.003381000	-0.51093
Area frame	0.05571	0.004169043	0.05145	0.008919000	0.43276
Jewish					
Grade level					
Elementary	<b>0.46906</b>	<b>0.016746000</b>	<b>0.57346</b>	<b>0.049582000</b>	<b>-1.99490</b>
Secondary	0.29033	0.011129000	0.25972	0.060536000	0.49740
Combined	0.24061	0.009257000	0.16682	0.033279000	2.13610
Locale					
Central city	0.58564	0.014458000	0.68493	0.057216000	-1.68240
Suburban	0.38731	0.014939000	0.29455	0.053693000	1.66440
Town	0.00353	0.000119000	#	#	29.56590
Rural	0.02352	0.000795000	0.02052	0.019279000	0.15530
Enrollment					
0–99	0.32620	0.017503000	0.35194	0.077348000	-0.32453
100–199	0.25153	0.010412000	0.24104	0.060859000	0.16984
200–499	0.30350	0.010860000	0.30424	0.064968000	-0.01120
500–749	0.07055	0.002386000	0.06010	0.020304000	0.51130
750 or more	0.04821	0.001631000	0.04267	0.016091000	0.34230
Nonsectarian—regular					
Grade level					
Elementary	0.47238	0.014017000	0.46597	0.0309390000	0.18870
Secondary	0.13593	0.011402000	0.15610	0.0183130000	-0.93480
Combined	0.39169	0.013546000	0.37793	0.0286190000	0.43450
Locale					
Central city	<b>0.36399</b>	<b>0.017010000</b>	<b>0.44036</b>	<b>0.032540000</b>	<b>-2.07940</b>
Suburban	0.38296	0.014800000	0.31864	0.030990000	1.87270
Town	0.06214	0.002160000	0.05346	0.012390000	0.69040
Rural	0.19091	0.016510000	0.18754	0.025520000	0.11080
Enrollment					
0–99	0.45333	0.017346000	0.49678	0.031459000	-1.20950
100–199	0.18722	0.008943000	0.20522	0.025725000	-0.66090
200–499	0.24726	0.010974000	0.20274	0.022564000	1.77430
500–749	0.05625	0.004287000	0.06269	0.010587000	-0.56400
750 or more	0.05595	0.002628000	0.03257	0.006544000	3.31440

# Not applicable.

# Rounds to zero.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Documentation Data File," 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e., the nonresponse adjustment factor), such as by changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: affiliation stratum, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found 4 noteworthy cells of 120 possible cells in the stratum-level table. These noteworthy cells were found in Baptist enrollment, other religious locale, nonsectarian—regular locale, and nonsectarian—regular overall (table 34).

The nonsectarian—regular school stratum became noteworthy after the final weight was applied. While this result would appear to indicate that substantial nonresponse bias remains, the difference appears to have been caused primarily by the way in which the weighting procedure forces SASS estimates to agree with PSS estimates. This causes the final-weighted estimates to deviate from the sampling frame because PSS estimates sometimes do not agree with the SASS frame with respect to reporting characteristics.

**Table 34. Final-weighted private school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Affiliation stratum</b>					
Catholic—parochial	0.13259	0.001887430	0.12719	0.003020000	1.51662
Catholic—diocesan	0.10311	0.001539062	0.09650	0.003002000	1.95984
Catholic—private	0.03420	0.000835296	0.03268	0.001741000	0.78671
Baptist	0.06522	0.002435166	0.06127	0.004283000	0.80111
Jewish	0.03142	0.001102350	0.03107	0.000917000	0.24355
Lutheran	0.05894	0.001603829	0.05763	0.002644000	0.42246
Seventh-day Adventist	0.02790	0.000728993	0.02898	0.000886000	-0.94719
Other religious	0.27388	0.004354534	0.27307	0.007449000	0.09432
Nonsectarian—regular	<b>0.09880</b>	<b>0.003277581</b>	<b>0.12072</b>	<b>0.004113000</b>	<b>-4.16900</b>
Nonsectarian—special emphasis	0.07282	0.002853535	0.07381	0.004337000	-0.19162
Nonsectarian—special education	0.04542	0.001884298	0.04694	0.003261000	-0.40363
Area frame	0.05571	0.004169043	0.05013	0.007539000	0.64753
<b>Baptist</b>					
<b>Grade level</b>					
Elementary	0.24888	0.020827000	0.28366	0.023046000	-1.11968
Secondary	0.02145	0.003141000	0.02456	0.005148000	-0.51571
Combined	0.72967	0.020370000	0.69178	0.023918000	1.20605
<b>Locale</b>					
Central city	0.26490	0.015971000	0.31332	0.057443000	-0.81212
Suburban	0.32196	0.018713000	0.29975	0.057436000	0.36767
Town	0.12338	0.013973000	0.09732	0.026332000	0.87421
Rural	0.28976	0.018195000	0.28961	0.040246000	0.00340

See notes at end of table.

**Table 34. Final-weighted private school frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08—Continued**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Baptist—Continued</b>					
Enrollment					
0–99	<b>0.53140</b>	<b>0.018353000</b>	<b>0.42604</b>	<b>0.044196000</b>	<b>2.20164</b>
100–199	0.23166	0.012563000	0.25300	0.040739000	-0.50056
200–499	<b>0.19026</b>	<b>0.007456000</b>	<b>0.27503</b>	<b>0.040251000</b>	<b>-2.07081</b>
500–749	0.03130	0.001186000	0.02213	0.010773000	0.84609
750 or more	0.01537	0.000582000	0.02379	0.009941000	-0.84555
Other religious					
Grade level					
Elementary	0.48726	0.010649000	0.49382	0.014287000	-0.36814
Secondary	0.04452	0.005853000	0.04906	0.005602000	-0.56037
Combined	0.46823	0.010975000	0.45711	0.014362000	0.61520
Locale					
Central city	0.26733	0.012012000	0.26188	0.011531000	0.32731
Suburban	0.25908	0.012533000	0.30549	0.015554000	-2.32340
Town	0.12138	0.002908000	0.10236	0.019030000	0.98801
Rural	0.35221	0.009982000	0.33027	0.026248000	0.78128
Enrollment					
0–99	0.57687	0.009970000	0.57309	0.022547000	0.15333
100–199	0.19397	0.007406000	0.18289	0.017725000	0.57678
200–499	0.16503	0.003621000	0.17636	0.017882000	-0.62099
500–749	0.03676	0.001055000	0.04611	0.007778000	-1.19120
750 or more	0.02737	0.000589000	0.02155	0.004273000	1.34928
Nonsectarian—regular					
Grade level					
Elementary	0.47238	0.014017000	0.47386	0.020311000	-0.05997
Secondary	0.13593	0.011402000	0.13720	0.013150000	-0.07297
Combined	0.39169	0.013546000	0.38894	0.017697000	0.12339
Locale					
Central city	<b>0.36399</b>	<b>0.017010000</b>	<b>0.44127</b>	<b>0.032707000</b>	<b>-2.09625</b>
Suburban	0.38296	0.014800000	0.32209	0.033350000	1.66829
Town	0.06214	0.002160000	0.05243	0.012267000	0.77956
Rural	0.19091	0.016510000	0.18421	0.024326000	0.22789
Enrollment					
0–99	0.45333	0.017346000	0.47473	0.032009000	-0.58780
100–199	0.18722	0.008943000	0.20306	0.026963000	-0.55760
200–499	0.24726	0.010974000	0.21803	0.023832000	1.11407
500–749	0.05625	0.004287000	0.07014	0.011250000	-1.15374
750 or more	0.05595	0.002628000	0.03403	0.006602000	3.08479

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Private School Documentation Data File," 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### Summary for Public School Principals

The overall response rate for public school principals was 79.5 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, locale, and enrollment). A review of response rates by state revealed that 34 states had response rates below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 1 out of 442 comparisons that were significant and noteworthy in the state-level table based upon the previously identified criteria. This base-weighted difference was for Minnesota schools with 200–499 students (table 35). While the proportion of respondents from California public schools was noteworthy and differed significantly from the proportion on the frame, none of the state's reporting characteristics differed significantly from the proportion on the frame.

Among the reporting characteristics, there were significant and noteworthy differences between the frame and base-weighted respondents for principals from central city and rural schools.

**Table 35. Base-weighted public school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Minnesota</b>					
Grade level					
Elementary	0.51173	0.01594	0.55936	0.03281	1.3058
Secondary	0.38158	0.02543	0.32233	0.03223	-1.4432
Combined	0.10668	0.01086	0.11831	0.02198	0.4744
Locale					
Central city	0.23550	0.02232	0.23297	0.03026	-0.0673
Suburban	0.24037	0.00614	0.23739	0.04455	-0.0663
Town	0.20983	0.01087	0.22300	0.03872	0.3275
Rural	0.31430	0.02791	0.30665	0.04046	-0.1556
Enrollment					
0–99	0.28552	0.03100	0.15359	0.04973	-2.2513
100–199	0.11687	0.01367	0.06730	0.02163	-1.9373
200–499	0.30766	0.01062	0.41870	0.04670	2.3185
500–749	0.16202	0.00371	0.17890	0.03422	0.4904
750–999	0.06419	†	0.10902	0.02272	1.9732
1,000 or more	0.06375	†	0.07248	0.01103	0.7915
<b>California</b>					
Overall	0.10469	0.00284	0.09109	0.00527	-2.2718
Grade level					
Elementary	0.68922	0.02319	0.68143	0.04103	-0.1653
Secondary	0.27109	0.01194	0.27805	0.03552	0.1857
Combined	0.03969	0.00309	0.04052	0.00675	0.1118

See notes at end of table.

**Table 35. Base-weighted public school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
California—Continued					
Locale					
Central city	0.39137	0.00748	0.41639	0.04619	0.5347
Suburban	0.35687	0.01766	0.33087	0.03543	-0.6568
Town	0.09657	0.01039	0.10298	0.02546	0.2331
Rural	0.15518	0.01415	0.14976	0.03275	-0.1519
Enrollment					
0–99	0.11967	0.02615	0.08163	0.03360	-0.8934
100–199	0.06004	0.00183	0.06344	0.02130	0.1590
200–499	0.26468	0.00715	0.26907	0.04104	0.1054
500–749	0.25664	0.00121	0.29706	0.03961	1.0200
750–999	0.14745	0.00330	0.13643	0.01909	-0.5688
1,000 or more	0.15152	0.00228	0.15238	0.02185	0.0391
Overall reporting characteristics					
Grade level					
Elementary	0.67444	0.00370	0.68275	0.01107	0.7120
Secondary	0.24674	0.00325	0.24033	0.00715	-0.8161
Combined	0.07881	0.00154	0.07691	0.00515	-0.3535
Locale					
Central city	<b>0.26770</b>	<b>0.00286</b>	<b>0.23489</b>	<b>0.00793</b>	<b>-3.8921</b>
Suburban	0.28393	0.00272	0.27437	0.01017	-0.9081
Town	0.14753	0.00199	0.15769	0.00848	1.1664
Rural	0.30084	0.00258	0.33305	0.01130	2.7789
Enrollment					
0–99	0.09820	0.00445	0.08351	0.00863	-1.5129
100–199	0.08680	0.00161	0.08856	0.00607	0.2803
200–499	0.38677	0.00227	0.40845	0.01323	1.6151
500–749	0.23159	0.00072	0.22057	0.00835	-1.3149
750–999	0.09630	0.00042	0.10000	0.00582	0.6341
1,000 or more	0.10033	0.00038	0.09889	0.00463	-0.3100

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Principal Documentation Data File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e., the nonresponse adjustment factor), such as by changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy

comparisons are evidence of potential bias. The analysis of the final-weighted differences found 4 noteworthy cells of 442 possible cells. These noteworthy cells were found in Minnesota enrollment, Nebraska secondary schools, and Virginia locale (table 36). In addition, central city and small schools were noteworthy at the national level after the final weight was applied.

**Table 36. Final-weighted public school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristics					
Locale					
Central city	<b>0.2677</b>	<b>0.0029</b>	<b>0.2384</b>	<b>0.0081</b>	<b>-3.3925</b>
Suburban	0.2839	0.0027	0.2863	0.0102	0.2234
Town	0.1475	0.0020	0.1532	0.0074	0.7382
Rural	0.3008	0.0026	0.3223	0.0112	1.8698
Enrollment					
0–99	<b>0.0982</b>	<b>0.0045</b>	<b>0.0769</b>	<b>0.0063</b>	<b>-2.7593</b>
100–199	0.0868	0.0016	0.0874	0.0060	0.0929
200–499	0.3868	0.0023	0.4003	0.0135	0.9912
500–749	0.2316	0.0007	0.2308	0.0100	-0.0815
750–999	0.0963	0.0004	0.1021	0.0058	0.9923
1,000 or more	0.1003	0.0004	0.1027	0.0049	0.4833
Minnesota					
Grade level					
Elementary	0.5117	0.0159	0.5267	0.0298	0.4444
Secondary	0.3816	0.0254	0.3623	0.0331	-0.4618
Combined	0.1067	0.0109	0.1110	0.0236	0.1644
Locale					
Central city	0.2355	0.0223	0.2250	0.0344	-0.2551
Suburban	0.2404	0.0061	0.2568	0.0301	0.5337
Town	0.2098	0.0109	0.2345	0.0340	0.6910
Rural	0.3143	0.0279	0.2837	0.0330	-0.7080
Enrollment					
0–99	0.2855	0.0310	0.1819	0.0533	-1.6810
100–199	0.1169	0.0137	0.0703	0.0255	-1.6091
200–499	<b>0.3077</b>	<b>0.0106</b>	<b>0.4181</b>	<b>0.0452</b>	<b>2.3790</b>
500–749	0.1620	0.0037	0.1630	0.0336	0.0275
750–999	0.0642	†	0.0998	0.0200	1.7788
1,000 or more	0.0638	†	0.0669	0.0234	0.1323

See notes at end of table.

**Table 36. Final-weighted public school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Nebraska</b>					
Grade level					
Elementary	0.6411	0.0632	0.6165	0.0659	-0.2694
Secondary	<b>0.1823</b>	†	<b>0.2063</b>	<b>0.0092</b>	<b>2.6208</b>
Combined	0.1766	0.0141	0.1772	0.0177	0.0279
Locale					
Central city	0.1795	†	0.1534	0.0291	-0.8952
Suburban	0.0710	†	0.0742	0.0242	0.1304
Town	0.2063	0.0030	0.2110	0.0449	0.1026
Rural	0.5432	0.0640	0.5615	0.0886	0.1673
Enrollment					
0–99	0.3071	0.0640	0.2177	0.0665	-0.9683
100–199	0.1622	†	0.1817	0.0604	0.3231
200–499	0.3906	†	0.4725	0.0635	1.2906
500–749	0.0864	†	0.0792	0.0280	-0.2575
750–999	0.0240	†	0.0260	0.0188	0.1086
1,000 or more	0.0298	†	0.0229	0.0048	-1.4132
<b>Virginia</b>					
Grade level					
Elementary	0.7378	0.0102	0.7433	0.0169	0.2754
Secondary	0.2317	0.0054	0.2266	0.0083	-0.5151
Combined	0.0305	0.0034	0.0302	0.0054	-0.0535
Locale					
Central city	0.2376	0.0067	0.2036	0.0292	-1.1330
Suburban	<b>0.3050</b>	<b>0.0093</b>	<b>0.2320</b>	<b>0.0310</b>	<b>-2.2590</b>
Town	0.0944	†	0.1066	0.0270	0.4502
Rural	<b>0.3630</b>	<b>0.0054</b>	<b>0.4578</b>	<b>0.0455</b>	<b>2.0679</b>
Enrollment					
0–99	0.0448	0.0028	0.0171	0.0056	-4.3944
100–199	0.0605	0.0022	0.0871	0.0327	0.8133
200–499	0.3507	0.0061	0.3838	0.0454	0.7208
500–749	0.2853	†	0.2985	0.0331	0.3995
750–999	0.1146	0.0074	0.0831	0.0210	-1.4179
1,000 or more	0.1441	0.0067	0.1305	0.0200	-0.6467

See notes at end of table.

**Table 36. Final-weighted public school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristics					
Grade level					
Elementary	0.6744	0.0037	0.6822	0.0063	1.0657
Secondary	0.2467	0.0033	0.2424	0.0042	-0.8229
Combined	0.0788	0.0015	0.0757	0.0037	-0.7824
Locale					
Central city	<b>0.2677</b>	<b>0.0029</b>	<b>0.2384</b>	<b>0.0081</b>	<b>-3.3925</b>
Suburban	0.2839	0.0027	0.2863	0.0102	0.2234
Town	0.1475	0.0020	0.1532	0.0074	0.7382
Rural	0.3008	0.0026	0.3223	0.0112	1.8698
Enrollment					
0–99	<b>0.0982</b>	<b>0.0045</b>	<b>0.0769</b>	<b>0.0063</b>	<b>-2.7593</b>
100–199	0.0868	0.0016	0.0874	0.0060	0.0929
200–499	0.3868	0.0023	0.4003	0.0135	0.9912
500–749	0.2316	0.0007	0.2308	0.0100	-0.0815
750–999	0.0963	0.0004	0.1021	0.0058	0.9923
1,000 or more	0.1003	0.0004	0.1027	0.0049	0.4833

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Principal Documentation Data File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for Private School Principals**

The overall response rate for private school principals was 72.2 percent, requiring a closer examination of nonresponse on this file. The more detailed analysis was performed by strata and the three primary reporting characteristics (i.e., school level, locale, and enrollment). The overall response rate for all 12 strata (including the area frame) was below 85 percent. For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 4 out of 144 comparisons that were significant and noteworthy in the stratum-level table based upon the previously identified criteria. The noteworthy differences occurred in two strata: Baptist and Jewish (table 37).

Among the national-level reporting characteristics, there were three significant and noteworthy differences between the frame and base-weighted respondents for private school principals: Catholic—parochial, Catholic—diocesan, and Nonsectarian—regular.

**Table 37. Base-weighted private school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristic					
Affiliation stratum					
Catholic—parochial	<b>0.13331</b>	<b>0.001923873</b>	<b>0.14900</b>	<b>0.004764000</b>	<b>-3.05328</b>
Catholic—diocesan	<b>0.10412</b>	<b>0.001600685</b>	<b>0.12027</b>	<b>0.004081000</b>	<b>-3.68484</b>
Catholic—private	0.03453	0.000837981	0.03835	0.002120000	-1.67459
Baptist	0.06585	0.002452136	0.06240	0.004596000	0.66236
Jewish	0.03120	0.001162089	0.02175	0.002346000	3.60993
Lutheran	0.05951	0.001633288	0.06712	0.003959000	-1.77560
Seventh-day Adventist	0.02817	0.000738510	0.03153	0.002186000	-1.45759
Other religious	0.27172	0.004341965	0.25331	0.008833000	1.87078
Nonsectarian—regular	<b>0.09788</b>	<b>0.003182240</b>	<b>0.08612</b>	<b>0.004344000</b>	<b>2.18543</b>
Nonsectarian—special emphasis	0.07189	0.002722882	0.07083	0.005035000	0.18583
Nonsectarian—special education	0.04586	0.001897209	0.04873	0.003543000	-0.71348
Area frame	0.05595	0.004217499	0.05061	0.008622000	0.55701
Baptist					
Grade level					
Elementary	<b>0.24888</b>	<b>0.020827000</b>	<b>0.32353</b>	<b>0.031865000</b>	<b>-1.96082</b>
Secondary	0.02145	0.003141000	0.02515	0.002993000	-0.85372
Combined	<b>0.72967</b>	<b>0.020370000</b>	<b>0.65132</b>	<b>0.032689000</b>	<b>2.03413</b>
Locale					
Central city	0.26490	0.015971000	0.25099	0.035279000	0.35919
Suburban	0.32196	0.018713000	0.28016	0.041278000	0.92224
Town	0.12338	0.013973000	0.12422	0.030919000	-0.02475
Rural	0.28976	0.018195000	0.34462	0.052472000	-0.98794
Enrollment					
0–99	0.53140	0.018353000	0.45555	0.047463000	1.49054
100–199	0.23166	0.012563000	0.25529	0.040720000	-0.55443
200–499	0.19026	0.007456000	0.23920	0.033289000	-1.43458
500–749	0.03130	0.001186000	0.03209	0.014076000	-0.05542
750 or more	0.01537	0.000582000	0.01787	0.008553000	-0.29173
Jewish					
Grade level					
Elementary	0.47669	0.019805000	0.63200	0.052341000	-2.77530
Secondary	0.27879	0.017331000	0.18454	0.057720000	1.56390
Combined	<b>0.24452</b>	<b>0.009670000</b>	<b>0.18346</b>	<b>0.034201000</b>	<b>1.71810</b>

See notes at end of table.

**Table 37. Base-weighted private school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08—Continued**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Jewish—Continued					
Locale					
Central city	0.57890	0.016351000	0.72298	0.057393000	-2.41430
Suburban	0.39361	0.016640000	0.25426	0.053077000	2.50540
Town	0.00359	0.000129000	#	†	27.76300
Rural	0.02390	0.000861000	0.02277	0.021266000	0.05330
Enrollment					
0–99	0.31525	0.018142000	0.28078	0.076709000	0.43729
100–199	0.25562	0.010431000	0.28589	0.066508000	-0.44967
200–499	0.30844	0.011156000	0.33414	0.067529000	-0.37550
500–749	0.07170	0.002583000	0.04488	0.020636000	1.28950
750 or more	0.04900	0.001765000	0.05431	0.015359000	-0.34350

# Not applicable.

# Rounds to zero.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Principal Documentation Data File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor), such as changing the collapsing order or the number of categories in the weighting variable). Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: affiliation stratum, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found 4 noteworthy cells of 144 possible cells in the stratum-level table. These noteworthy cells were found in Baptist, Jewish, and other religious affiliation strata (table 38). In addition, nonsectarian regular schools were noteworthy overall after the final weight was applied.

**Table 38. Final-weighted private school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Affiliation stratum					
Nonsectarian—regular	<b>0.09788</b>	<b>0.003200</b>	<b>0.11952</b>	<b>0.004200</b>	<b>-4.09329</b>
Baptist					
Grade level					
Elementary	0.24888	0.020830	0.28112	0.028556	-0.91202
Secondary	0.02145	0.003140	0.01832	0.003498	0.66579
Combined	0.72967	0.020370	0.70056	0.029574	0.81049
Locale					
Central city	0.26490	0.015970	0.31133	0.054154	-0.82220
Suburban	0.32196	0.018710	0.29897	0.054281	0.40050
Town	0.12338	0.013970	0.10096	0.030946	0.66030
Rural	0.28976	0.018200	0.28875	0.047087	0.01990
Enrollment					
0–99	<b>0.53140</b>	<b>0.018400</b>	<b>0.38968</b>	<b>0.042900</b>	<b>3.03943</b>
100–199	0.23166	0.012560	0.25321	0.041883	-0.49292
200–499	<b>0.19026</b>	<b>0.007500</b>	<b>0.28995</b>	<b>0.041300</b>	<b>-2.37759</b>
500–749	0.03130	0.001190	0.04250	0.018350	-0.60873
750 or more	0.01537	0.000580	0.02466	0.011084	-0.83700
Jewish					
Grade level					
Elementary	0.47669	0.019810	0.56164	0.054705	-1.46020
Secondary	0.27879	0.017330	0.22551	0.055216	0.92070
Combined	0.24452	0.009670	0.21285	0.044740	0.69190
Locale					
Central city	<b>0.57890</b>	<b>0.016400</b>	<b>0.72231</b>	<b>0.062700</b>	<b>-2.21490</b>
Suburban	0.39361	0.016640	0.25594	0.059667	2.22260
Town	0.00359	0.000130	#	†	27.76300
Rural	0.02390	0.000860	0.02175	0.020162	0.10660
Enrollment					
0–99	0.31525	0.018140	0.29766	0.081318	0.21110
100–199	0.25562	0.010430	0.30021	0.070091	-0.62930
200–499	0.30844	0.011160	0.31022	0.069273	-0.02540
500–749	0.07170	0.002580	0.03394	0.020693	1.81070
750 or more	0.04900	0.001770	0.05797	0.016932	-0.52690

See notes at end of table.

**Table 38. Final-weighted private school principal frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected strata and reporting characteristics: 2007–08—Continued**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Other religious					
Grade level					
Elementary	0.47796	0.010800	0.48165	0.017065	-0.18273
Secondary	0.04532	0.005930	0.04855	0.006354	-0.37075
Combined	0.47671	0.011310	0.46980	0.016757	0.34198
Locale					
Central city	0.26999	0.012820	0.26473	0.015957	0.25710
Suburban	<b>0.26141</b>	<b>0.012900</b>	<b>0.31039</b>	<b>0.018100</b>	<b>-2.20440</b>
Town	0.12359	0.002950	0.07344	0.014730	3.33800
Rural	0.34501	0.011020	0.35144	0.024654	-0.23820
Enrollment					
0–99	0.56920	0.010700	0.57145	0.025756	-0.08084
100–199	0.19748	0.007790	0.18560	0.020300	0.54655
200–499	0.16802	0.003780	0.16942	0.020623	-0.06694
500–749	0.03743	0.001110	0.04810	0.008579	-1.23338
750 or more	0.02787	0.000620	0.02542	0.005858	0.41499

† Not applicable.

# Rounds to zero.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Principal Documentation Data File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for BIE-Funded School Principals**

The overall response rate for BIE-funded school principals was 79.2 percent. Comparisons of the frame distribution to the base-weighted respondent distribution for state groupings, school level, enrollment, and locale showed that none of the comparisons were both significant and noteworthy, because all significant cells had fewer than 30 interviews. An analysis of the final-weighted comparisons also found no noteworthy differences.

**Conclusion/Course of Action.** Based on this analysis, evidence of substantial bias was not found.

### **Summary for Public School Library Media Centers**

The overall response rate for public school library media centers was 81.7 percent, requiring a closer examination of nonresponse on this data file. The more detailed analysis was performed by state and the three primary reporting characteristics (i.e., school level, locale, and enrollment). The overall response rate for 31 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 11 out of 403 comparisons that were significant and noteworthy in the state-level table based upon the previously identified criteria. The noteworthy differences occurred in seven states. Selected states are

highlighted below in table 39. These items were Arizona secondary, California elementary and secondary, California enrollment characteristics, Colorado secondary, Massachusetts enrollment, Minnesota elementary, secondary, and enrollment, Nebraska combined, and Washington secondary. Among the national-level reporting characteristics, there were significant and noteworthy differences between the frame and base-weighted respondents for library media centers in California, secondary schools, combined schools, central city and rural schools, and schools in the lowest and highest enrollment categories (less than 100 and 1,000 or more).

**Table 39. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristic					
Grade level					
Elementary	0.67694	0.00500	0.72072	0.01073	3.6983
Secondary	<b>0.24555</b>	<b>0.00686</b>	<b>0.21815</b>	<b>0.00403</b>	<b>-3.4439</b>
Combined	<b>0.07750</b>	<b>0.00252</b>	<b>0.06113</b>	<b>0.00422</b>	<b>-3.3305</b>
Locale					
Central city	<b>0.26722</b>	<b>0.00519</b>	<b>0.23003</b>	<b>0.00783</b>	<b>-3.9590</b>
Suburban	0.28429	0.00459	0.27485	0.01019	-0.8447
Town	0.14728	0.00347	0.15505	0.00793	0.8976
Rural	<b>0.30121</b>	<b>0.00378</b>	<b>0.34007</b>	<b>0.01172</b>	<b>3.1556</b>
Enrollment					
0–99	<b>0.09680</b>	<b>0.00658</b>	<b>0.03891</b>	<b>0.00521</b>	<b>-6.8975</b>
100–199	0.08611	0.00297	0.07750	0.00641	-1.2187
200–499	0.38710	0.00430	0.42390	0.01233	2.8181
500–749	0.23246	0.00149	0.24111	0.00841	1.0128
750–999	0.09668	0.00081	0.10717	0.00631	1.6489
1,000 or more	<b>0.10084</b>	<b>0.00057</b>	<b>0.11141</b>	<b>0.00509</b>	<b>2.0637</b>
Arizona					
Grade level					
Elementary	0.63755	0.03500	0.74764	0.06029	1.5792
Secondary	<b>0.31827</b>	<b>0.02745</b>	<b>0.24090</b>	<b>0.02723</b>	<b>-2.0010</b>
Combined	0.04418	0.01374	0.01146	0.00771	-2.0768
Locale					
Central city	0.44930	0.03580	0.39282	0.06203	-0.7886
Suburban	0.17219	0.01970	0.17925	0.03466	0.1771
Town	0.13805	0.02357	0.15418	0.05726	0.2605
Rural	0.24046	0.03230	0.27375	0.05261	0.5392
Enrollment					
0–99	0.17219	0.04682	0.05223	0.02696	-2.2204
100–199	0.10693	0.01835	0.05292	0.03285	-1.4354
200–499	0.23946	0.01624	0.27710	0.06977	0.5254
500–749	0.24046	0.01441	0.31636	0.05977	1.2345
750–999	0.13002	0.00234	0.15814	0.03922	0.7157
1,000 or more	0.11094	†	0.14326	0.03169	1.0199

See notes at end of table.

**Table 39. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
California					
Overall	<b>0.10482</b>	<b>0.00327</b>	<b>0.08823</b>	<b>0.00357</b>	<b>-3.4268</b>
Grade level					
Elementary	<b>0.69158</b>	<b>0.02451</b>	<b>0.78261</b>	<b>0.03776</b>	<b>2.0221</b>
Secondary	<b>0.26937</b>	<b>0.02598</b>	<b>0.18216</b>	<b>0.02016</b>	<b>-2.6520</b>
Combined	0.03905	0.00413	0.03523	0.00731	-0.4550
Locale					
Central city	0.39082	0.02007	0.41100	0.04298	0.4254
Suburban	0.35760	0.02001	0.33543	0.03670	-0.5304
Town	0.09640	0.00998	0.10258	0.02281	0.2482
Rural	0.15518	0.01951	0.15099	0.03095	-0.1145
Enrollment					
0–99	0.11910	0.02783	0.01252	0.00909	-3.6404
100–199	0.05950	0.00970	0.03448	0.01642	-1.3119
200–499	0.26447	0.01044	0.28821	0.04111	0.5597
500–749	<b>0.25751</b>	<b>0.00447</b>	<b>0.34354</b>	<b>0.04212</b>	<b>2.0311</b>
750–999	0.14762	0.00463	0.13988	0.02285	-0.3320
1,000 or more	0.15181	0.00284	0.18137	0.02359	1.2441
Colorado					
Grade level					
Elementary	0.70622	†	0.73862	0.05491	0.5901
Secondary	<b>0.22716</b>	<b>0.01367</b>	<b>0.18272</b>	<b>0.01731</b>	<b>-2.0148</b>
Combined	0.06662	0.00747	0.07867	0.01143	0.8825
Locale					
Central city	0.31028	0.01040	0.30173	0.04500	-0.1851
Suburban	0.28934	0.00543	0.27377	0.05190	-0.2984
Town	0.12310	0.01112	0.11315	0.03733	-0.2554
Rural	0.27728	†	0.31134	0.05389	0.6320
Enrollment					
0–99	0.07551	0.01252	0.06156	0.03913	-0.3395
100–199	0.09708	0.00869	0.12551	0.04313	0.6462
200–499	0.47081	†	0.49904	0.04816	0.5862
500–749	0.22081	†	0.19013	0.04417	-0.6946
750–999	0.05647	†	0.04995	0.02057	-0.3170
1,000 or more	0.07931	†	0.07381	0.00915	-0.6011

See notes at end of table.

**Table 39. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Massachusetts					
Grade level					
Elementary	0.77803	0.02659	0.78191	0.05837	0.0605
Secondary	0.20413	0.01213	0.20887	0.01522	0.2435
Combined	0.01785	0.00168	0.00922	0.00259	-2.7955
Locale					
Central city	0.23648	0.02028	0.17951	0.04059	-1.2556
Suburban	0.60736	0.01706	0.67331	0.07254	0.8850
Town	0.03346	0.01396	0.02617	0.01759	-0.3246
Rural	0.12270	†	0.12101	0.03314	-0.0510
Enrollment					
0–99	0.02119	0.00781	#	†	-2.7132
100–199	0.07752	0.01431	0.04427	0.02882	-1.0333
200–499	0.48578	0.02438	0.40078	0.07417	-1.0887
500–749	<b>0.24205</b>	†	<b>0.36354</b>	<b>0.05362</b>	<b>2.2658</b>
750–999	0.08254	0.00721	0.09220	0.02539	0.3660
1,000 or more	0.09091	†	0.09922	0.01931	0.4303
Minnesota					
Grade level					
Elementary	<b>0.51496</b>	<b>0.02214</b>	<b>0.61272</b>	<b>0.03463</b>	<b>2.3784</b>
Secondary	<b>0.38097</b>	<b>0.03753</b>	<b>0.28874</b>	<b>0.02380</b>	<b>-2.0754</b>
Combined	0.10406	0.01454	0.09855	0.02057	-0.2187
Locale					
Central city	0.23537	0.02947	0.19873	0.02877	-0.8896
Suburban	0.23939	0.02943	0.20054	0.02864	-0.9460
Town	0.20992	0.01336	0.25647	0.04561	0.9795
Rural	0.31532	0.02881	0.34426	0.04565	0.5361
Enrollment					
0–99	0.28361	0.04427	0.07897	0.03243	-3.7290
100–199	0.11702	0.01612	0.05380	0.02055	-2.4205
200–499	0.30773	0.01519	0.46094	0.05286	2.7857
500–749	0.16347	0.00374	0.20061	0.04079	0.9067
750–999	0.06387	0.00400	0.11405	0.02403	2.0599
1,000 or more	0.06431	†	0.09163	0.01414	1.9321

See notes at end of table.

**Table 39. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)	
	Proportion	Standard error	Proportion	Standard error		
<b>Nebraska</b>						
Grade level						
Elementary	0.64135	0.06119	0.58093	0.05987	-0.7058	
Secondary	0.18173	0.00823	0.19438	0.01219	0.8601	
Combined	<b>0.17692</b>	<b>0.01412</b>	<b>0.22470</b>	<b>0.01088</b>	<b>2.6804</b>	
Locale						
Central city	0.17885	0.00823	0.15217	0.02722	-0.9382	
Suburban	0.07115	†	0.08038	0.02594	0.3558	
Town	0.20673	0.00299	0.20116	0.04141	-0.1342	
Rural	0.54327	0.06187	0.56629	0.06238	0.2620	
Enrollment						
0–99	0.30577	0.06266	0.18212	0.05096	-1.5310	
100–199	0.16250	†	0.22569	0.06099	1.0361	
200–499	0.39135	†	0.46440	0.07310	0.9993	
500–749	0.08654	†	0.07658	0.02220	-0.4486	
750–999	0.02404	†	0.02821	0.01793	0.2326	
1,000 or more	0.02981	†	0.02300	0.00580	-1.1741	
<b>Washington</b>						
Grade level						
Elementary	0.64200	0.03729	0.73124	0.04698	1.4878	
Secondary	<b>0.28076</b>	<b>0.02031</b>	<b>0.22295</b>	<b>0.01988</b>	<b>-2.0341</b>	
Combined	0.07724	0.01805	0.04581	0.02366	-1.0562	
Locale						
Central city	0.24838	0.00489	0.23262	0.03540	-0.4410	
Suburban	0.37095	0.01366	0.37556	0.05409	0.0826	
Town	0.13830	0.00742	0.11992	0.02767	-0.6416	
Rural	0.24237	0.04169	0.27190	0.05402	0.4328	
Enrollment						
0–99	0.13552	0.04382	0.02872	0.02342	-2.1495	
100–199	0.07771	0.00830	0.09359	0.03711	0.4176	
200–499	0.41166	0.00614	0.42780	0.06019	0.2668	
500–749	0.23497	0.00306	0.31207	0.04169	1.8444	
750–999	0.06522	†	0.04149	0.01400	-1.6950	
1,000 or more	0.07493	†	0.09634	0.01713	1.2499	

See notes at end of table.

**Table 39. Base-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristics					
Grade level					
Elementary	0.67694	0.00500	0.72072	0.01073	3.6983
Secondary	<b>0.24555</b>	<b>0.00686</b>	<b>0.21815</b>	<b>0.00403</b>	<b>-3.4439</b>
Combined	<b>0.07750</b>	<b>0.00252</b>	<b>0.06113</b>	<b>0.00422</b>	<b>-3.3305</b>
Locale					
Central city	<b>0.26722</b>	<b>0.00519</b>	<b>0.23003</b>	<b>0.00783</b>	<b>-3.9590</b>
Suburban	0.28429	0.00459	0.27485	0.01019	-0.8447
Town	0.14728	0.00347	0.15505	0.00793	0.8976
Rural	<b>0.30121</b>	<b>0.00378</b>	<b>0.34007</b>	<b>0.01172</b>	<b>3.1556</b>
Enrollment					
0–99	<b>0.09680</b>	<b>0.00658</b>	<b>0.03891</b>	<b>0.00521</b>	<b>-6.8975</b>
100–199	0.08611	0.00297	0.07750	0.00641	-1.2187
200–499	0.38710	0.00430	0.42390	0.01233	2.8181
500–749	0.23246	0.00149	0.24111	0.00841	1.0128
750–999	0.09668	0.00081	0.10717	0.00631	1.6489
1,000 or more	<b>0.10084</b>	<b>0.00057</b>	<b>0.11141</b>	<b>0.00509</b>	<b>2.0637</b>

† Not applicable.

# Rounds to zero.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Library Media Center Documentation Data File," 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor), such as changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found 10 noteworthy cells of 403 possible cells in the state-level table. The noteworthy differences occurred in six states. Selected states are highlighted below in table 40. These items were California elementary and secondary, California enrollment characteristics, Michigan elementary, Minnesota elementary and enrollment, Texas elementary, Virginia suburban, and Wyoming secondary and enrollment.

Among the national-level reporting characteristics, there were significant and noteworthy differences between the frame and final-weighted respondents for library media centers in secondary schools, combined schools, central city schools, and schools in the lowest and two highest enrollment categories (less than 100 and 750 or more).

**Table 40. Final-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Overall reporting characteristic					
Grade level					
Elementary	0.67694	0.00500	0.72229	0.00597	5.8236
Secondary	<b>0.24555</b>	<b>0.00686</b>	<b>0.21656</b>	<b>0.00491</b>	<b>-3.4364</b>
Combined	<b>0.07750</b>	<b>0.00252</b>	<b>0.06115</b>	<b>0.00281</b>	<b>-4.3318</b>
Locale					
Central city	<b>0.26722</b>	<b>0.00519</b>	<b>0.23608</b>	<b>0.00985</b>	<b>-2.7969</b>
Suburban	0.28429	0.00459	0.28985	0.01033	0.4919
Town	0.14728	0.00347	0.15115	0.00741	0.4730
Rural	0.30121	0.00378	0.32292	0.01317	1.5845
Enrollment					
0–99	<b>0.09680</b>	<b>0.00658</b>	<b>0.03696</b>	<b>0.00382</b>	<b>-7.8649</b>
100–199	0.08611	0.00297	0.07419	0.00614	-1.7476
200–499	0.38710	0.00430	0.41357	0.01357	1.8595
500–749	0.23246	0.00149	0.25019	0.01044	1.6812
750–999	<b>0.09668</b>	<b>0.00081</b>	<b>0.11001</b>	<b>0.00642</b>	<b>2.0600</b>
1,000 or more	<b>0.10084</b>	<b>0.00057</b>	<b>0.11509</b>	<b>0.00546</b>	<b>2.5958</b>
California					
Grade level					
Elementary	<b>0.69158</b>	<b>0.02451</b>	<b>0.78976</b>	<b>0.03086</b>	<b>2.4913</b>
Secondary	<b>0.26937</b>	<b>0.02598</b>	<b>0.17591</b>	<b>0.02352</b>	<b>-2.6669</b>
Combined	0.03905	0.00413	0.03433	0.00674	-0.5971
Locale					
Central city	0.39082	0.02007	0.40713	0.02875	0.4652
Suburban	0.35760	0.02001	0.35283	0.03320	-0.1231
Town	0.09640	0.00998	0.10399	0.02154	0.3197
Rural	0.15518	0.01951	0.13606	0.02742	-0.5682
Enrollment					
0–99	0.11910	0.02783	0.01047	0.00700	-3.7854
100–199	0.05950	0.00970	0.03061	0.01541	-1.5866
200–499	0.26447	0.01044	0.25595	0.03749	-0.2189
500–749	0.25751	0.00447	0.35971	0.04145	2.4514
750–999	0.14762	0.00463	0.16093	0.02987	0.4403
1,000 or more	0.15181	0.00284	0.18232	0.02862	1.0608

See notes at end of table.

**Table 40. Final-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Michigan</b>					
Grade level					
Elementary	<b>0.65140</b>	<b>0.01222</b>	<b>0.73234</b>	<b>0.03251</b>	<b>2.3305</b>
Secondary	0.21748	0.03107	0.21734	0.02094	-0.0037
Combined	0.13111	0.02195	0.05032	0.02744	-2.2991
Locale					
Central city	0.24688	0.03055	0.17910	0.04565	-1.2340
Suburban	0.33325	0.01430	0.37146	0.06315	0.5901
Town	0.12981	0.01338	0.13991	0.03950	0.2422
Rural	0.29006	0.02616	0.30953	0.05688	0.3110
Enrollment					
0–99	0.09053	0.02436	0.01978	0.01727	-2.3693
100–199	0.09417	0.02296	0.06694	0.03249	-0.6844
200–499	0.51015	0.02752	0.57347	0.05812	0.9847
500–749	0.18574	0.00337	0.20380	0.03425	0.5248
750–999	0.05775	†	0.06005	0.02100	0.1095
1,000 or more	0.06165	0.00777	0.07596	0.01953	0.6808
<b>Minnesota</b>					
Grade level					
Elementary	<b>0.51496</b>	<b>0.02214</b>	<b>0.62480</b>	<b>0.04456</b>	<b>2.2075</b>
Secondary	0.38097	0.03753	0.28243	0.04542	-1.6725
Combined	0.10406	0.01454	0.09276	0.01622	-0.5188
Locale					
Central city	0.23537	0.02947	0.19437	0.03054	-0.9661
Suburban	0.23939	0.02943	0.19810	0.04040	-0.8261
Town	0.20992	0.01336	0.28526	0.03927	1.8163
Rural	0.31532	0.02881	0.32227	0.03924	0.1428
Enrollment					
0–99	0.28361	0.04427	0.06527	0.02698	-4.2115
100–199	0.11702	0.01612	0.05414	0.02375	-2.1906
200–499	<b>0.30773</b>	<b>0.01519</b>	<b>0.47024</b>	<b>0.05038</b>	<b>3.0884</b>
500–749	<b>0.16347</b>	<b>0.00374</b>	<b>0.20483</b>	<b>0.03994</b>	<b>1.0310</b>
750–999	<b>0.06387</b>	<b>0.00400</b>	<b>0.11623</b>	<b>0.02491</b>	<b>2.0754</b>
1,000 or more	<b>0.06431</b>	†	<b>0.08930</b>	<b>0.03266</b>	<b>0.7652</b>

See notes at end of table.

**Table 40. Final-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Texas</b>					
Grade level					
Elementary	<b>0.62456</b>	<b>0.00468</b>	<b>0.71639</b>	<b>0.01267</b>	<b>6.7988</b>
Secondary	0.26538	0.03823	0.22606	0.03301	-0.7785
Combined	0.11005	0.00917	0.05755	0.01214	-3.4507
Locale					
Central city	0.37265	0.02197	0.37143	0.06430	-0.0180
Suburban	0.18563	0.02234	0.16514	0.03934	-0.4529
Town	0.15266	0.02510	0.13719	0.03769	-0.3416
Rural	0.28906	0.00655	0.32624	0.06383	0.5794
Enrollment					
0–99	0.12108	0.03854	0.01351	0.00986	-2.7040
100–199	0.08927	0.00616	0.09505	0.04676	0.1226
200–499	0.31577	0.00935	0.36435	0.06238	0.7702
500–749	0.25633	0.00249	0.24673	0.05292	-0.1812
750–999	0.12131	†	0.14019	0.04452	0.4241
1,000 or more	0.09624	†	0.14016	0.02758	1.5925
<b>Virginia</b>					
Grade level					
Elementary	0.73977	0.00949	0.75894	0.01472	1.0946
Secondary	0.23164	0.00985	0.22163	0.01386	-0.5887
Combined	0.02859	0.00591	0.01942	0.00630	-1.0616
Locale					
Central city	0.23706	0.00798	0.20661	0.02923	-1.0050
Suburban	<b>0.30557</b>	<b>0.00877</b>	<b>0.24048</b>	<b>0.03060</b>	<b>-2.0448</b>
Town	0.09463	†	0.11645	0.03180	0.6862
Rural	0.36274	0.01048	0.43646	0.04325	1.6566
Enrollment					
0–99	0.04436	0.00426	0.01436	0.00633	-3.9319
100–199	0.05914	0.00863	0.07124	0.03170	0.3683
200–499	0.35091	0.00617	0.37166	0.04351	0.4722
500–749	0.28586	†	0.30027	0.03266	0.4412
750–999	0.11533	0.00614	0.09864	0.02314	-0.6971
1,000 or more	0.14441	0.00673	0.14383	0.02037	-0.0270

See notes at end of table.

**Table 40. Final-weighted public school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08—Continued**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Wyoming					
Grade level					
Elementary	0.66964	0.04849	0.65672	0.07067	-0.1507
Secondary	<b>0.25000</b>	†	<b>0.28307</b>	<b>0.01201</b>	<b>2.7535</b>
Combined	0.08036	0.01858	0.06020	0.01557	-0.8316
Locale					
Central city	0.14286	0.01335	0.09359	0.02385	-1.8026
Suburban	0.01488	†	0.00800	0.00634	-1.0852
Town	0.34226	0.04960	0.41712	0.04908	1.0728
Rural	0.50000	0.02590	0.48128	0.06880	-0.2546
Enrollment					
0–99	0.26786	0.05138	0.15958	0.03768	-1.6994
100–199	0.20536	0.00789	0.21773	0.06905	0.1780
200–499	<b>0.43750</b>	<b>0.00620</b>	<b>0.52793</b>	<b>0.03812</b>	<b>2.3415</b>
500–749	0.03869	†	0.04459	0.01873	0.3150
750–999	0.02679	†	0.02480	0.01042	-0.1910
1,000 or more	0.02381	†	0.02536	0.00466	0.3326
Overall reporting characteristics					
Grade level					
Elementary	0.67694	0.00500	0.72229	0.00597	5.8236
Secondary	<b>0.24555</b>	<b>0.00686</b>	<b>0.21656</b>	<b>0.00491</b>	<b>-3.4364</b>
Combined	<b>0.07750</b>	<b>0.00252</b>	<b>0.06115</b>	<b>0.00281</b>	<b>-4.3318</b>
Locale					
Central city	<b>0.26722</b>	<b>0.00519</b>	<b>0.23608</b>	<b>0.00985</b>	<b>-2.7969</b>
Suburban	0.28429	0.00459	0.28985	0.01033	0.4919
Town	0.14728	0.00347	0.15115	0.00741	0.4730
Rural	0.30121	0.00378	0.32292	0.01317	1.5845
Enrollment					
0–99	<b>0.09680</b>	<b>0.00658</b>	<b>0.03696</b>	<b>0.00382</b>	<b>-7.8649</b>
100–199	0.08611	0.00297	0.07419	0.00614	-1.7476
200–499	0.38710	0.00430	0.41357	0.01357	1.8595
500–749	0.23246	0.00149	0.25019	0.01044	1.6812
750–999	<b>0.09668</b>	<b>0.00081</b>	<b>0.11001</b>	<b>0.00642</b>	<b>2.0600</b>
1,000 or more	<b>0.10084</b>	<b>0.00057</b>	<b>0.11509</b>	<b>0.00546</b>	<b>2.5958</b>

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Library Media Center Documentation Data File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for BIE-Funded School Library Media Centers**

The overall response rate for BIE-funded school library media centers was 78.9 percent. Though this falls below the desired 85 percent response rate, a more detailed analysis of state groupings, school level, enrollment, and locale showed that one (“All other states”) of the base-weight frame to respondent distribution comparisons was both significant and noteworthy (see table 41). All of the other significant comparisons had fewer than 30 interviews.

**Table 41. Base-weighted BIE-funded school library media center frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State grouping and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>State grouping</b>					
Arizona	0.28846	0.010959	0.26772	0.022750	0.8213
New Mexico	0.23718	0.008129	0.22835	0.021790	0.3797
South Dakota	0.12179	0.005435	0.09449	0.015410	1.6707
All other states	<b>0.35256</b>	<b>0.011354</b>	<b>0.40945</b>	<b>0.024990</b>	<b>-2.0726</b>
<b>Grade level</b>					
Elementary	0.61538	0.010606	0.63780	0.028480	-0.7377
Secondary	0.10897	0.009724	0.11811	0.019690	-0.4162
Combined	0.27564	0.012533	0.24409	0.025850	1.0982
<b>Locale</b>					
Central city	0.02564	†	0.02362	0.009190	0.2198
Suburban	0.03205	†	0.03937	0.008230	-0.8894
Town	0.07051	0.009300	0.07874	0.009560	-0.6171
Rural	0.87179	0.015761	0.85827	0.042080	0.3009
<b>Enrollment</b>					
0–99	0.28846	0.010201	0.29921	0.024070	1.6454
100–199	0.30128	0.009194	0.30709	0.024010	-0.4112
200–499	0.31410	0.011362	0.31496	0.023580	-0.2260
500–749	0.01282	†	0.01575	0.008440	-0.0329
750–999	0.00641	†	0.00787	0.003620	-0.3472
1,000 or more	0.28846	0.010201	0.29921	0.024070	-0.4033

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE-funded School Library Media Center Documentation Data File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor, such as changing the collapsing order or the number of categories in the weighting variable). Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state groupings, grade level, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found no noteworthy cells.

**Conclusion/Course of Action.** Based on this analysis, evidence of substantial bias was not found.

### **Summary for Public School Teachers**

The overall response rate for public school teachers was 84.0 percent. The more detailed analysis was performed by state and the three primary reporting characteristics—school level, locale, and enrollment). The overall response rate for 23 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 1 out of 299 comparisons that were significant and noteworthy in the state-level table based upon the previously identified criteria. The noteworthy difference occurred in Wyoming (table 42).

Among the national-level reporting characteristics, there were no significant and noteworthy differences between the frame and base-weighted respondents for public school teachers.

**Table 42. Base-weighted public school teacher frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)	
	Proportion	Standard error	Proportion	Standard error		
<b>Wyoming</b>						
Grade level						
Elementary	0.6118	0.0037	0.6350	0.0204	-1.1175	
Secondary	0.3278	0.0031	0.3040	0.0200	1.1723	
Combined	0.0604	0.0011	0.0609	0.0053	-0.1022	
Locale						
City	0.2211	0.0030	0.2005	0.0257	0.7982	
Suburb	0.0075	0.0001	0.0080	0.0067	-0.0841	
Town	0.4083	0.0048	0.4118	0.0364	-0.0946	
Rural	0.3631	0.0041	0.3797	0.0336	-0.4911	
Enrollment						
0–99	0.0659	0.0006	0.0753	0.0175	-0.5373	
100–199	0.1797	0.0047	0.1916	0.0357	-0.3322	
200–499	0.5390	0.0045	0.5386	0.0394	0.0111	
500–749	0.0701	0.0020	0.0770	0.0216	-0.3216	
750–999	0.0480	0.0018	0.0490	0.0175	-0.0619	
1,000 or more	<b>0.0975</b>	<b>0.0015</b>	<b>0.0685</b>	<b>0.0061</b>	<b>4.6418</b>	

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Documentation Data File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor), such as changing the collapsing order or the number of categories in the weighting variable that defines the Nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state, subject, experience, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found no noteworthy cells of 299 possible cells.

**Conclusion/Course of Action.** Based on this analysis, evidence of substantial bias was not found.

### **Summary for Private School Teachers**

The overall response rate for private school teachers was 77.5 percent. The overall response rate for 11 strata, including the area frame, was below 85 percent. For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. None of the comparisons were significant and noteworthy based upon the previously identified criteria.

Among the affiliation strata, only Jewish schools (table 43) had a significant and noteworthy difference between the frame and base-weighted respondents for private school teachers.

**Table 43. Base-weighted public school teacher frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by affiliation stratum and area frame: 2007–08**

Affiliation stratum and area frame	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Affiliation stratum					
Catholic—parochial	0.1598	0.0011	0.1682	0.0048	-1.6904
Catholic—diocesan	0.1516	0.0013	0.1634	0.0053	-2.1512
Catholic—private	0.0717	0.0008	0.0733	0.0052	-0.3040
Baptist	0.0535	0.0007	0.0503	0.0038	0.8394
Jewish	<b>0.0420</b>	<b>0.0006</b>	<b>0.0306</b>	<b>0.0040</b>	<b>2.7713</b>
Lutheran	0.0403	0.0004	0.0451	0.0027	-1.7903
Seventh-day Adventist	0.0135	0.0002	0.0132	0.0010	0.2418
Other religious	0.2220	0.0017	0.2191	0.0088	0.3227
Nonsectarian—regular	0.1370	0.0012	0.1351	0.0066	0.2902
Nonsectarian—special emphasis	0.0554	0.0011	0.0509	0.0036	1.2043
Nonsectarian—special education	0.0343	0.0008	0.0349	0.0029	-0.1942
Area frame	0.0189	0.0010	0.0159	0.0037	0.7867

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor, such as changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells). Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: affiliation, subject, experience, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found no noteworthy cells of 156 possible cells in the affiliation stratum-level table.

Among the reporting characteristics and affiliation strata, Catholic—parochial, Catholic—diocesan, Jewish, nonsectarian—regular, and grade level (elementary and combined schools) had significant and noteworthy differences between the frame and the final-weighted estimates for private school teachers (table 44). While this result would appear to indicate that substantial nonresponse bias remains, the differences appear to have been caused primarily by the way in which the weighting procedure forces SASS estimates to agree with PSS estimates. This causes final-weighted estimates to deviate from the

frame because PSS estimates sometimes do not agree with the SASS frame with respect to affiliation stratum and reporting characteristics.

**Table 44. Final-weighted public school teacher frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected reporting characteristics: 2007–08**

Affiliation and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Affiliation stratum</b>					
Catholic—parochial	<b>0.1598</b>	<b>0.0011</b>	<b>0.1346</b>	<b>0.0044</b>	<b>5.5436</b>
Catholic—diocesan	<b>0.1516</b>	<b>0.0013</b>	<b>0.1199</b>	<b>0.0044</b>	<b>6.9100</b>
Catholic—private	0.0717	0.0008	0.0644	0.0051	1.4317
Baptist	0.0535	0.0007	0.0558	0.0051	-0.4381
Jewish	<b>0.0420</b>	<b>0.0006</b>	<b>0.0546</b>	<b>0.0059</b>	<b>-2.1324</b>
Lutheran	0.0403	0.0004	0.0312	0.0024	3.7455
Seventh-day Adventist	0.0135	0.0002	0.0108	0.0011	2.4286
Other religious	0.2220	0.0017	0.2398	0.0111	-1.5770
Nonsectarian—regular	<b>0.1370</b>	<b>0.0012</b>	<b>0.1811</b>	<b>0.0088</b>	<b>-4.9754</b>
Nonsectarian—special emphasis	0.0554	0.0011	0.0535	0.0047	0.3982
Nonsectarian—special education	0.0343	0.0008	0.0358	0.0034	-0.4256
Area frame	0.0189	0.0010	0.0185	0.0037	0.0938
<b>Grade level</b>					
Elementary	<b>0.4900</b>	<b>0.0019</b>	<b>0.4373</b>	<b>0.0212</b>	<b>2.4703</b>
Secondary	0.1734	0.0016	0.1648	0.0071	1.1831
Combined	<b>0.3366</b>	<b>0.0023</b>	<b>0.3979</b>	<b>0.0235</b>	<b>-2.5945</b>
<b>Locale</b>					
City	0.4023	0.0016	0.4147	0.0126	-0.9770
Suburb	0.3796	0.0014	0.3670	0.0135	0.9218
Town	0.0785	0.0006	0.0757	0.0056	0.5047
Rural	0.1396	0.0010	0.1426	0.0094	-0.3194
<b>Enrollment</b>					
0–99	0.4023	0.0016	0.4147	0.0126	-0.9770
100–199	0.3796	0.0014	0.3670	0.0135	0.9218
200–499	0.0785	0.0006	0.0757	0.0056	0.5047
500–749	0.1396	0.0010	0.1426	0.0094	-0.3194
750–999	0.4023	0.0016	0.4147	0.0126	-0.9770
1,000 or more	0.3796	0.0014	0.3670	0.0135	0.9218

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Documentation Data File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for BIE-Funded School Teachers**

The overall response rate for BIE-funded school teachers was 81.8 percent. This falls below the desired 85 percent response rate, so a more detailed analysis of the frame distribution to the base-weighted respondent distribution by state groupings, school level, enrollment, and locale showed that two of the comparisons were significant and noteworthy. The base-weighted proportion of teachers from BIE-funded schools located in South Dakota and of schools with less than 100 students who responded to the survey were significant and noteworthy (table 45).

**Table 45. Base-weighted BIE-funded school teacher frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State grouping and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>State grouping</b>					
Arizona	0.2582	0.006357	0.2627	0.015766	-0.2675
New Mexico	0.1702	0.003919	0.1671	0.010539	0.2731
<b>South Dakota</b>	<b>0.1559</b>	<b>0.004218</b>	<b>0.1272</b>	<b>0.009464</b>	<b>2.7745</b>
All other states	0.4158	0.006486	0.4430	0.012783	-1.9024
<b>Grade level</b>					
Elementary	0.5470	0.005228	0.5464	0.015012	0.0389
Secondary	0.1375	0.002270	0.1499	0.006287	-1.8641
Combined	0.3155	0.004682	0.3037	0.011827	0.9310
<b>Locale</b>					
City	0.0199	0.000220	0.0216	0.002261	-0.7321
Suburb	0.0218	0.001866	0.0268	0.005380	-0.8805
Town	0.0710	0.002287	0.0808	0.005265	-1.7094
Rural	0.8872	0.002803	0.8707	0.007624	2.0299
<b>Enrollment</b>					
0–99	<b>0.1148</b>	<b>0.003838</b>	<b>0.0913</b>	<b>0.007665</b>	<b>2.7475</b>
100–199	0.3450	0.004665	0.3526	0.013982	-0.5183
200–499	0.2308	0.005725	0.2343	0.011713	-0.2746
500–749	0.2848	0.005258	0.2915	0.015951	-0.3983
750–999	0.0196	0.000217	0.0244	0.000685	-6.5741
1,000 or more	0.0051	0.000056	0.0060	0.000663	-1.3854

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE-funded School Teacher Documentation Data File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor), such as changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state grouping, subject, experience, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences

found 1 noteworthy cell of 52 possible cells in the state grouping-level table. The one cell was for combined schools in the “all other states” category (table 46).

**Table 46. Final-weighted BIE-funded school teacher frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State grouping and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
All other states					
Grade level					
Elementary	0.4632	0.007757	0.4022	0.037774	1.5811
Secondary	0.2125	0.003261	0.1964	0.044583	0.3604
Combined	<b>0.3244</b>	<b>0.005926</b>	<b>0.4014</b>	<b>0.037811</b>	<b>-2.0140</b>
Locale					
City	0.0350	0.000538	0.0248	0.008594	1.1840
Suburb	0.0396	0.000608	0.0383	0.008020	0.1647
Town	0.1142	0.003099	0.1164	0.010189	-0.2056
Rural	0.8112	0.003615	0.8205	0.013750	-0.6562
Enrollment					
0–99	0.0103	0.001808	0.0082	0.003536	0.5308
100–199	0.5088	0.007894	0.5076	0.030001	0.0394
200–499	0.1972	0.011811	0.1861	0.016033	0.5597
500–749	0.2243	0.005583	0.2368	0.018211	-0.6592
750–999	0.0472	0.000725	0.0458	0.009884	0.1402
1,000 or more	0.0122	0.000187	0.0155	0.001990	-1.6548

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE-funded School Teacher Documentation Data File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for the Public School Teacher Listing Form**

The overall response rate for the public school Teacher Listing Form was 86.2 percent. The overall response rate for 16 states was below 85 percent. For these states, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 2 out of 208 comparisons that were significant and noteworthy in the state-level table based upon the previously identified criteria. The noteworthy differences occurred in Massachusetts and Virginia (table 47).

Among the reporting characteristics, no items had a significant and noteworthy difference between the frame and base-weighted respondents for the public school Teacher Listing Form.

**Table 47. Base-weighted public school Teacher Listing Form frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Massachusetts</b>					
Grade level					
Elementary	0.77679	†	0.78884	0.047160	0.2555
Secondary	0.20433	0.007183	0.19822	0.016300	-0.3430
Combined	0.01888	0.000999	0.01294	0.002700	-2.0633
Locale					
Central city	0.23765	†	0.22373	0.038180	-0.3646
Suburban	0.60633	0.007132	0.64619	0.059790	0.6620
Town	0.03387	†	0.03937	0.022460	0.2449
Rural	0.12215	†	0.09071	0.024790	-1.2683
Enrollment					
0–99	0.02165	†	0.00958	0.009580	-1.2599
100–199	0.07885	†	0.06191	0.031300	-0.5412
200–499	0.48584	0.000999	0.42322	0.067120	-0.9329
500–749	<b>0.24098</b>	†	<b>0.34814</b>	<b>0.046350</b>	<b>2.3120</b>
750–999	0.08218	0.007183	0.07246	0.020240	-0.4526
1,000 or more	0.09051	†	0.08469	0.017250	-0.3374
<b>Virginia</b>					
Grade level					
Elementary	0.73795	0.009470	0.74552	0.043990	0.1682
Secondary	0.23156	0.005429	0.21850	0.018730	-0.6697
Combined	0.03048	0.003414	0.03598	0.008780	0.5838
Locale					
Central city	0.23746	0.006717	0.21012	0.032580	-0.8219
Suburban	<b>0.30531</b>	<b>0.008177</b>	<b>0.22647</b>	<b>0.033040</b>	<b>-2.3163</b>
Town	0.09440	†	0.11198	0.031780	0.5532
Rural	0.36283	0.005431	0.45143	0.058240	1.5147
Enrollment					
0–99	0.04474	0.002831	0.01934	0.008210	-2.9248
100–199	0.06047	0.002213	0.09523	0.038310	0.9058
200–499	0.35054	0.006101	0.37301	0.057320	0.3898
500–749	0.28515	†	0.28569	0.040370	0.0134
750–999	0.11504	0.006128	0.09576	0.022780	-0.8173
1,000 or more	0.14405	0.006713	0.13096	0.022300	-0.5621

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e., the nonresponse adjustment factor), such as changing the collapsing order or the number of categories in the weighting variable that defines the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: state, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the

final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found 2 noteworthy cells of 208 possible cells in the state-level table—the 2 cells for suburban and rural schools in Virginia (table 48). In addition, central cities showed a noteworthy difference among the national-level reporting characteristics.

**Table 48. Final-weighted public school Teacher Listing Form frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected state and reporting characteristics: 2007–08**

State and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Virginia</b>					
Grade level					
Elementary	0.73795	0.009470	0.73924	0.024581	0.0490
Secondary	0.23156	0.005429	0.22949	0.008533	-0.2047
Combined	0.03048	0.003414	0.03127	0.005543	0.1214
Locale					
Central city	0.23746	0.006717	0.21230	0.029934	-0.8201
Suburban	<b>0.30531</b>	<b>0.008177</b>	<b>0.23229</b>	<b>0.028868</b>	<b>-2.4337</b>
Town	0.09440	†	0.10252	0.028717	0.2828
Rural	<b>0.36283</b>	<b>0.005431</b>	<b>0.45289</b>	<b>0.045157</b>	<b>1.9801</b>
Enrollment					
0–99	0.04474	0.002831	0.01769	0.005836	-4.1703
100–199	0.06047	0.002213	0.09036	0.033497	0.8904
200–499	0.35054	0.006101	0.36281	0.044130	0.2754
500–749	0.28515	†	0.29796	0.033215	0.3857
750–999	0.11504	0.006128	0.09918	0.023491	-0.6533
1,000 or more	0.14405	0.006713	0.13199	0.020665	-0.5550
<b>Overall reporting characteristics</b>					
Grade level					
Elementary	0.67435	0.003670	0.68109	0.006884	0.8640
Secondary	0.24679	0.002852	0.24184	0.004865	-0.8778
Combined	0.07886	0.001316	0.07707	0.003501	-0.4786
Locale					
Central city	<b>0.26767</b>	<b>0.002773</b>	<b>0.23493</b>	<b>0.008074</b>	<b>-3.8351</b>
Suburban	0.28389	0.002262	0.27740	0.010173	-0.6228
Town	0.14750	0.001981	0.15700	0.007453	1.2319
Rural	0.30094	0.002029	0.33067	0.011270	2.5962
Enrollment					
0–99	0.09833	0.003978	0.08495	0.007124	-1.6398
100–199	0.08679	0.001615	0.08657	0.006077	-0.0350
200–499	0.38671	0.002276	0.40050	0.014759	0.9234
500–749	0.23155	0.000721	0.22637	0.009138	-0.5651
750–999	0.09629	0.000398	0.10028	0.006137	0.6488
1,000 or more	0.10032	0.000363	0.10132	0.004778	0.2087

† Not applicable.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Teacher Listing Form File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for the Private School Teacher Listing Form**

The unit response rate for the private school Teacher Listing Form was 85.1 percent. The overall response rate for five strata (including the area frame) was below 85 percent. For these strata, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. Three out of 60 comparisons were significant and noteworthy in the affiliation stratum-level table based upon the previously identified criteria. The noteworthy differences occurred in two strata: Jewish and nonsectarian—regular (table 49).

Among the national-level reporting characteristics, no items had a significant and noteworthy difference between the frame and base-weighted respondents for the private school Teacher Listing Form.

**Table 49. Base-weighted private school Teacher Listing Form frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected affiliation stratum and reporting characteristics: 2007–08**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Jewish</b>					
Grade level					
Elementary	<b>0.46906</b>	<b>0.016750</b>	<b>0.57083</b>	<b>0.038570</b>	<b>-2.4204</b>
Secondary	0.29033	0.011130	0.21515	0.043364	1.6792
Combined	0.24061	0.009260	0.21402	0.031680	0.8056
Locale					
Central city	0.58564	0.014460	0.61961	0.052699	-0.6217
Suburban	0.38731	0.014940	0.34802	0.054677	0.6933
Town	0.00353	0.000120	#	†	29.5659
Rural	0.02352	0.000800	0.03237	0.021736	-0.4071
Enrollment					
0–99	0.32620	0.017500	0.31237	0.067108	0.19942
100–199	0.25153	0.010410	0.26007	0.054060	-0.15524
200–499	0.30350	0.010860	0.36539	0.057367	-1.0600
500–749	0.07055	0.002390	0.03600	0.014762	2.3108
750 or more	0.04821	0.001630	0.02616	0.011902	1.8353
<b>Nonsectarian—regular</b>					
Grade level					
Elementary	0.47238	0.014020	0.48692	0.026196	-0.4894
Secondary	0.13593	0.011400	0.15483	0.012789	-1.1028
Combined	0.39169	0.013550	0.35825	0.023708	1.2245
Locale					
Central city	<b>0.36399</b>	<b>0.017010</b>	<b>0.44171</b>	<b>0.027240</b>	<b>-2.4201</b>
Suburban	0.38296	0.014800	0.33608	0.025355	1.5966
Town	0.06214	0.002160	0.04375	0.010821	1.6664
Rural	0.19091	0.016510	0.17846	0.021806	0.4553

See notes at end of table.

**Table 49. Base-weighted private school Teacher Listing Form frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected affiliation stratum and reporting characteristics: 2007–08—Continued**

Affiliation stratum and reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
Nonsectarian—regular—Continued					
Enrollment					
0–99	0.45333	0.017350	0.50891	0.032654	-1.5031
100–199	0.18722	0.008940	0.20083	0.024771	-0.5169
200–499	<b>0.24726</b>	<b>0.010970</b>	<b>0.20010</b>	<b>0.020620</b>	<b>2.0187</b>
500–749	0.05625	0.004290	0.05913	0.010156	-0.2618
750 or more	0.05595	0.002630	0.03103	0.006068	3.7685

† Not applicable.

# Rounds to zero.

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Listing Form File,” 2007–08.

Noteworthy items from the base-weighted comparisons in 2003–04 informed the weighting scheme (i.e. the nonresponse adjustment factor), such as changing the collapsing order or the number of categories in the weighting variable used to define the nonresponse adjustment cells. Designed to reduce nonresponse bias, the nonresponse adjustment factor included the following variables: affiliation stratum, grade level, locale, and enrollment. Once the final weights were calculated, another comparison of the frame distribution to the final-weighted respondent distribution for the reporting characteristics was conducted. Because the final-weighted comparison to the frame reflects the nonresponse adjustment, the noteworthy comparisons are evidence of potential bias. The analysis of the final-weighted differences found no noteworthy cells of 60 possible cells in the affiliation stratum-level table. Among the national-level reporting characteristics and affiliation strata, Nonsectarian regular schools displayed a significant and noteworthy difference between the frame and the final-weighted TLF estimates (table 50). While this result would appear to indicate that substantial nonresponse bias remains, the differences appear to have been caused primarily by the way in which the weighting procedure forces SASS estimates to agree with PSS estimates. This causes final-weighted estimates to deviate from the frame since PSS estimates sometimes do not agree with the SASS frame with respect to affiliation strata and reporting characteristics.

**Table 50. Final-weighted private school Teacher Listing Form frame distribution, interviewed sample distribution, standard errors, and *t* statistic, by selected reporting characteristics: 2007–08**

Reporting characteristic	Frame distribution (adjusted for out-of-scope schools) and standard error		Interviewed sample distribution (adjusted for out-of-scope schools) and standard error		<i>t</i> statistic (frame compared to sample)
	Proportion	Standard error	Proportion	Standard error	
<b>Affiliation stratum</b>					
Catholic—parochial	0.13259	0.00189	0.12937	0.00333	0.84028
Catholic—diocesan	0.10311	0.00154	0.09875	0.00318	1.23400
Catholic—private	0.03420	0.00084	0.03327	0.00184	0.45690
Baptist	0.06522	0.00244	0.06121	0.00455	0.77784
Jewish	0.03142	0.00110	0.02662	0.00190	2.18060
Lutheran	0.05894	0.00160	0.06022	0.00285	-0.39201
Seventh-day Adventist	0.02790	0.00073	0.03028	0.00093	-2.01623
Other religious	0.27388	0.00435	0.26638	0.00823	0.80581
Nonsectarian—regular	<b>0.09880</b>	<b>0.00328</b>	<b>0.12354</b>	<b>0.00458</b>	<b>-4.39273</b>
Nonsectarian—special emphasis	0.07282	0.00285	0.07428	0.00456	-0.27127
Nonsectarian—special education	0.04542	0.00188	0.04720	0.00341	-0.45616
Area frame	0.05571	0.00417	0.04886	0.00726	0.81764
<b>Grade level</b>					
Elementary	0.57779	0.00433	0.58398	0.00846	-0.65155
Secondary	0.10522	0.00239	0.10340	0.00497	0.32906
Combined	0.31699	0.00402	0.31261	0.00832	0.47356
<b>Locale</b>					
Central city	0.34825	0.00513	0.34811	0.00822	0.01445
Suburban	0.32984	0.00589	0.34109	0.00905	-1.04178
Town	0.10241	0.00345	0.10624	0.00747	-0.46553
Rural	0.21950	0.00832	0.20456	0.00983	1.16018
<b>Enrollment</b>					
0–99	0.45413	0.00430	0.45988	0.01137	-0.47309
100–199	0.22522	0.00302	0.21590	0.00857	1.02589
200–499	0.23989	0.00252	0.24436	0.00864	-0.49681
500–749	0.05203	0.00120	0.05189	0.00380	0.03394
750 or more	0.02873	0.00030	0.02797	0.00228	0.33225

NOTE: Numbers that are bolded are noteworthy and are potential sources for bias.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Listing Form File,” 2007–08.

**Conclusion/Course of Action.** While the final weights reduced the potential for bias, cells with noteworthy differences remain and may be areas of potential bias.

### **Summary for the BIE-Funded School Teacher Listing Form**

The overall response rate for the BIE-funded school Teacher Listing Form was 87.3 percent. For the state groupings, the frame distribution was compared to the base-weighted respondent distribution for the reporting characteristics. The results of this analysis identified 0 out of 52 comparisons that were significant and noteworthy based upon the previously identified criteria.

Comparisons of the frame distribution to the base-weighted respondent distribution for the state groupings and reporting characteristics revealed that none were both significant and noteworthy.

The analysis of the final-weighted differences identified 0 out of 52 comparisons that were significant and noteworthy based upon the previously identified criteria.

**Conclusion/Course of Action.** Based on this analysis, evidence of substantial bias was not found.

### **Item Nonresponse Bias Analysis**

#### **Overview of Methodology**

The item bias analysis examined the overall response rate for each item on each data file.<sup>18</sup> The analysis included examining the item response rates by state for public sector files, affiliation stratum for private sector files, state groupings for BIE sector files, and by the reporting characteristics (i.e., locale, school level, and enrollment) for all data files using the final weight for all in-scope sampled units. If the overall response rate for the item fell below 70 percent, the item will be footnoted in National Center for Education Statistics (NCES) publications with “Item response rate is below 70 percent” as a method of cautioning the user that the low item response rate introduces some potential for bias in the imputation procedure. For any state, affiliation stratum, or state grouping where the item response rate was less than 85 percent, a more detailed analysis was done by the reporting characteristics. The results were highlighted if that particular cell had a significantly higher or lower response rate than the file as a whole and bolded if the difference was noteworthy. A noteworthy difference met the following conditions:

- The difference relative to the overall response rate for the particular item was greater than 10 percent.
- The absolute difference was greater than one percentage point.
- The coefficient of variation was less than 15 percent.
- The cell had at least 30 interviews.

Table 51 presents the number of items by response rate for each data file. Of particular concern are the items with an overall response rate below 70 percent. These items are listed in exhibit 5.

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<sup>18</sup> For public school districts, screening items used to determine a district’s eligibility for the survey (A1–A4) or whether the district’s physical location or street address were different than what was presented on the survey cover (C1) were excluded from the analysis. The excluded screening items were used to verify that the respondent was a district and whether the district was still in operation, had the correct grade range, or had merged with another district.

**Table 51. Number of questionnaire items, by response rate category and data file: 2007–08**

Data file	Total items	Items 95 percent and above	Items between 85 and 94 percent	Items between 70 and 84 percent	Items below 70 percent
Public School District	97	61	34	2	0
Public School	167	91	67	9	0
BIE School	211	109	73	25	4
Private School	248	119	98	29	2
Public School Principal	174	145	26	3	0
BIE School Principal	174	144	26	3	1
Private School Principal	149	124	22	2	1
Public School Library Media Center	61	44	15	2	0
BIE School Library Media Center	61	42	14	5	0
Public School Teacher	257	146	88	14	9
BIE School Teacher	255	154	72	23	6
Private School Teacher	270	151	90	24	5

NOTE: BIE refers to the Bureau of Indian Education. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files," 2007–08.

**Exhibit 5. Items with a response rate below 70 percent, by data file: 2007–08**

Data file	Item
BIE School	Item 61_PK: Pre-kindergarten students participating in Title I program Item 65: Year began providing charter school instruction Item 66B: Percentage of students enrolled that are homeschooled Item 66C: Location of homeschooled students instruction
Private School	Item 64: Base salary for a teacher with a bachelor's degree and no experience Item 65D: Yearly salary for a teacher with a master's degree and 10 yrs. experience
BIE School Principal	Item 36: Days per year required to work under current contract
Private School Principal	Item 34: Days per year required to work under current contract
Public School Teacher	Item 22 (8) code: Subject code of 8 <sup>th</sup> class taught Item 22 (8) grade: Grade level of the 8 <sup>th</sup> class taught Item 22 (8) students: Numbers of students in the 8 <sup>th</sup> class taught Item 22 (9) code: Subject code of 9 <sup>th</sup> class taught Item 22 (9) grade: Grade level of the 9 <sup>th</sup> class taught Item 22 (9) students: Numbers of students in the 9 <sup>th</sup> class taught Item 22 (10) code: Subject code of 10 <sup>th</sup> class taught Item 22 (10) grade: Grade level of the 10 <sup>th</sup> class taught Item 22 (10) students: Numbers of students in the 10 <sup>th</sup> class taught
BIE School Teacher	Item 4: How much time working as a teacher in this school Item 34G (1),code: Additional content area of teaching certificate (3 <sup>rd</sup> ) Item 34G (2): Grade range of additional content area (3 <sup>rd</sup> ) Item 34H: Certificate allows teaching in additional content area (4 <sup>th</sup> ) Item 34I(1).code: Additional content area of teaching certificate (4 <sup>th</sup> ) Item 34I(2): Grade range of additional content area (4 <sup>th</sup> )
Private School Teacher	Item 22 (10) code: Subject code of 10 <sup>th</sup> class taught Item 22 (10) grade: Grade level of the 10 <sup>th</sup> class taught Item 22 (10) students: Numbers of students in the 10 <sup>th</sup> class taught Item 33J(1).code: Additional content area of teaching certificate (5 <sup>th</sup> ) Item 35H: Another certificate allows teaching in additional content area (4 <sup>th</sup> )

NOTE: BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School District, BIE School, Private School, BIE School Principal, Public School Teacher, BIE School Teacher, and Private School Teacher Documentation Data Files," 2007–08.

### **Summary of Conclusions**

**Public School Districts.** Two items had a response rate below 85 percent, requiring a closer examination. Of those items, all were above 70 percent, so no footnoting was necessary. The closer examination of response rates revealed no substantial evidence of a bias.

**Public Schools.** Nine items had a response rate below 85 percent, requiring a closer examination. Of those items, all were above 70 percent, so no footnoting was necessary. The closer examination of response rates revealed no substantial evidence of a bias.

**BIE Schools.** Twenty-nine items had a response rate below 85 percent, requiring a closer examination. Of those items, four were below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias, primarily because most of the detailed analysis cells had fewer than 30 interviews.

**Private Schools.** Thirty-one items had a response rate below 85 percent, requiring a closer examination. Of those items, two were below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias.

**Public School Principals.** Three items had a response rate below 85 percent, requiring a closer examination. Of those items, all had a response rate above 70 percent, so no footnoting was necessary. The closer examination of response rates revealed no substantial evidence of a bias.

**BIE School Principals.** Four items had a response rate below 85 percent, requiring a closer examination. One of these items had a response rate below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias, primarily because most of the analysis cells had fewer than 30 interviews.

**Private School Principals.** Three items had a response rate below 85 percent, requiring a closer examination. One of these items had a response rate below 70 percent, necessitating a footnote. The closer examination of response rates revealed no substantial evidence of a bias.

**Public School Library Media Centers.** Two items had a response rate below 85 percent, requiring a closer examination. All of the items had a response rate above 70 percent, so no footnoting was necessary. A closer examination of response rates revealed no substantial evidence of a bias.

**BIE School Library Media Centers.** Five items had a response rate below 85 percent, requiring a closer examination. All of the items had a response rate above 70 percent, so no footnoting was necessary. A closer examination of the response rates revealed no substantial evidence of a bias.

**Public School Teachers.** Twenty-three items had a response rate below 85 percent, necessitating a closer examination. Nine items had a response rate below 70 percent requiring a footnote. A closer examination of the response rates revealed no substantial evidence of a bias.

**BIE School Teachers.** Twenty-nine items had a response rate below 85 percent, requiring a closer examination. Six items had a response rate below 70 percent requiring a footnote. A closer examination of the response rates revealed no substantial evidence of a bias, primarily because most of the cells had fewer than 30 interviews.

**Private School Teachers.** Twenty-nine items had a response rate below 85 percent, requiring a closer examination. Five items had a response rate below 70 percent, necessitating a footnote. A closer examination of response rates revealed no substantial evidence of a bias.

## Chapter 7. Data Processing

Census Bureau field representatives and telephone interviewers were responsible for the first phase of data processing, updating the status of cases during data collection. This involved using the Regional Office Systems COntrol (ROSCO) system or WebCATI to track cases in their workload as well as assign an outcome code indicating the status (i.e., unable to contact, refusal, out of scope, etc.) of each questionnaire. Simultaneously, Census Bureau analysts resolved discrepancies for outcome codes and for split schools<sup>15</sup> in which the screener sampled a school other than the original sampled school.

Once this was completed, all cases were shipped to the Census Bureau clerical processing staff in Jeffersonville, Indiana. There, the cases were assigned a check-in code that indicated their completion status, and the data from completed questionnaires were captured and sent to Census Bureau analysts in weekly waves of reformatted datasets, by questionnaire type.

Data processing was conducted within each questionnaire. The one exception to this was the data collected on the Public School Questionnaire (With District Items) (SASS-3Y), which included items from both the School Questionnaire and the School District Questionnaire. Data from the SASS-3Y were split apart and combined with data collected from these two respective questionnaires. This change was made early on during the data reformatting stage of data processing so that data from the SASS-3Y were not processed independently.

Census Bureau analysts began the data review process by assigning a preliminary interview status code. A series of computer edits were then run on the data to identify inconsistencies, assign a final interview status to each case, and impute items that were still “not-answered” after taking into account item responses that were blank due to a questionnaire skip pattern. Once all of the “not-answered” items were imputed during the imputation stage and analysts had reviewed all data, the final data release files were prepared. The final step of data processing was to split the questionnaire datasets up into 12 data files by respondent type. These data files are the source files for the restricted-use files and documentation files. All tables in this chapter contain data by final data file and not by questionnaire.

### Questionnaire Check-in

Respondents were encouraged to complete and mail back all forms sent to the school. Questionnaires mailed to the National Processing Center (NPC) were immediately checked into the Automatic Tracking and Control (ATAC) system by clerical staff. At this stage, questionnaires received an outcome code of complete if any item on the questionnaire was answered. Additional outcome codes that were set included refusals, blanks, duplicates, Unavailable as Addressed (UAA), and various out-of-scope codes. The questionnaires were then grouped into batches by type and interview status (i.e., interviews, non-interviews, and out-of-scope for the survey) for data capture.

If a case entered telephone follow-up during data collection, Telephone Center (TC) interviewers urged respondents to mail their completed questionnaires to the NPC or in later follow-up phases attempted to complete the questionnaire over the phone with the respondent. In these later phases, the telephone centers used a modified ATAC system to track the interviewer questionnaires. Outcome codes were also

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<sup>15</sup> The screening process occasionally discovered cases where one school had split into several separate schools. For example, a school offering grades K–12 could have split into two separate schools—one school with grades K–5 and one school with grades 6–12. When a split resulted in two or three schools, the instrument randomly selected one of the schools to participate in SASS. When the split resulted in more than three schools, DSMD selected the school for SASS.

set in WebCATI, identifying the status of the case, until the form reached the NPC and could be checked into ATAC.

If a questionnaire was still outstanding following telephone follow-up, the case was sent to the field. Field representatives (FRs) had discretion over the method by which respondents returned their forms. The FR could arrange to pick up completed questionnaires at the school or could provide postage-paid envelopes for the schools to mail their completed questionnaires to the NPC. If the FR picked up the completed questionnaires at the school, he or she would then send the forms to NPC to be checked into the ATAC system. Field staff used ROSCO to assign an outcome code to each case. The general outcome code types were complete, out-of-scope, or non-interview.

The WebCATI and ROSCO systems were not used for the School District Questionnaires (SASS-1A). These questionnaires were tracked by the TCs and the ROs manually, using a specially designed database. When the School District Questionnaires were mailed to the NPC, they were checked in using the ATAC system.

Training for the FRs and the TC interviewers identified which items on each questionnaire were critical and instructed them to ensure completion of these items by the respondent. Critical items are those that must be answered in order for a questionnaire to be considered complete. For some questionnaire types, all of the critical items had to be answered in order for a questionnaire to be considered complete. For other questionnaire types, only a certain required number of items from a list of critical items had to be answered in order for a questionnaire to be considered complete (see exhibit 6 below).

Questionnaires completed over the phone or picked up by an FR were grouped into batches of 100 by questionnaire type and shipped to the clerical processing staff at the NPC, for ATAC check-in and data keying.

#### **Exhibit 6.   Question number and source code for critical items, by questionnaire: 2007–08**

Questionnaire	Page	Item	Source code <sup>1</sup>	Description
School District— 2 critical items	5	3	0276	Total number of K–12 students was reported (number should be greater than 0)
	6	8	0289	Total number of full-time equivalent teachers was reported (number should be greater than 0)
Principal— 8 critical items, 6 required	4	1 or 2	0025 or 0026	Years as principal of this or any school OR years as principal of this school was reported
	And at least 5 of the following items should have data:			
	4	3	0027	Teaching experience before becoming a principal
	4	4	0028	Teaching experience since becoming principal
	5	8	0032	Highest degree earned by the principal
	23	39	0240	Gender
	23	40	0241	Hispanic or Latino origin
	23	41	0242-0246	Race
	23	42	0248	Birth year

See notes at end of exhibit.

**Exhibit 6. Question number and source code for critical items, by questionnaire: 2007–08—Continued**

Private School Principal— 8 critical items, 6 required	4	1 or 2	0025 or 0026	Years as principal of this or any school OR years as principal of this school was answered
	And at least 5 of the following items should have data:			
	4	3	0027	Teaching experience before becoming a principal
	4	4	0028	Teaching experience since becoming principal
	5	8	0032	Highest degree earned by the principal
	22	36	0240	Gender
	22	37	0241	Hispanic or Latino origin
	22	38	0242–0246	Race
Public School— 2 critical items	22	39	0248	Birth year
	4	2	0039	K–12 student enrollment was reported (number should be greater than 0)
Private School— 2 critical items	13	28	0120 or 0121	Number of full- and/or part-time teachers was reported
	5	2	0434	Student enrollment was reported (number should be greater than 0)
	21	44	0120, 0520–0524	Number of full- and/or part-time teachers was reported
Public School (with district items)— 2 critical items	4	2	0039	K–12 student enrollment was reported (number should be greater than 0)
	15	33	0120 or 0121	Number of full- and/or part-time teachers was reported
Teacher and Private School Teacher— 7 critical items, 5 required	4	1 or 4	0025 or 0028	Position at school or full- or part-time teaching status was reported
	6	8 or 9	0036 or 0037	Year began teaching at this school OR at any school was reported
	9	12	0050–0064	Listed teaching at least one grade
	9	15	0067 or 5067	Main teaching assignment at the school was reported
	And at least one of the following questions should be answered:			
	13	23a	0110	Bachelor's degree
	14	25a	0120	Master's degree
	15	26a	0124	Other degrees
School Library Media Center— 1 critical item, 0 required	11	32a	0106	Total number of books in the library was reported

<sup>1</sup> Source codes are used to identify specific items on the SASS questionnaires. For each questionnaire item, the four-digit source code can be found to the left of the first answer choice.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Bureau of Indian Education (BIE) School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

## Discrepancy Resolution

Two main types of discrepancies occurred during data collection that needed to be resolved by Census Bureau analysts. The first type of discrepancy occurred across outcome codes from follow-up operations or the final status codes. The second type of discrepancy occurred when a school split and the screener sampled a school other than the original school, after the initial mailout.

### Outcome Code Discrepancies

Automation issues across multiple tracking systems led to problems with reconciling outcome codes for some cases from the library, school, teacher, and principal questionnaires and the Teacher Listing Form. SASS utilized three distinct systems to track outcome codes for questionnaires: WebCATI, ROSCO, and ATAC. In addition to these systems, Census Bureau analysts maintained final status codes, which were generally set based on information picked up from one of these three systems.

The purpose of the WebCATI system was to enable interviewers to record the history and outcome of each phone call made to a respondent. If an interviewer determined a case to be out-of-scope for the survey, an outcome code was set to reflect this. Outcome codes were passed on to Census Bureau analysts on a daily basis. If an out-of-scope outcome code was set, analysts set the case's final status code to out-of-scope, so that further resources were not wasted contacting these cases.

Similarly, the ROSCO system was set up so that FRs could update the status of each individual case in their workload using their laptop by recording when questionnaires were dropped off or picked up, or if they determined a case to be out-of-scope. This information was also passed on to Census Bureau analysts on a daily basis.

The Census Bureau clerical processing staff at the National Processing Center used the ATAC check-in system for the questionnaires. Initially, each questionnaire, as identified by the respondent's control number, was assigned a check-in code of '99,' which means that the form had not been received. As forms were received, the check-in code was changed to reflect whether the case provided an interview, refused to participate, or was out-of-scope for the survey. The latter two outcomes were generally determined based on notes a respondent made on the form that was returned.

Two types of discrepancies occurred as a result of this system. The first type occurred when at least one of the outcome codes from ROSCO, WebCATI, and ATAC or the final status code indicated that a case was out-of-scope and at least one of the remaining outcome codes indicated conflicting information. The second type occurred when the final status code for at least one of the questionnaires in a school indicated a school-wide out-of-scope (such as the school had closed, was not a school, or was wrongly classified), but the final status code for at least one of the other forms indicated that a complete questionnaire had been received, suggesting the school may actually be in-scope for the survey.

During data collection, Census Bureau analysts investigated cases where such discrepancies occurred by reviewing all available notes from follow-up operations, and conducting research online to determine whether a school was truly out-of-scope. Analysts worked to reconcile each of these cases and then updated the final status codes accordingly. Approximately 200 cases went through this resolution process. In most cases, the resolution was deleting an incorrect out-of-scope code or applying an out-of-scope code across all questionnaires for a particular school.

## Split School Discrepancies

The screening process occasionally discovered cases where one school had split into several separate schools. When a split resulted in two or three schools, the interviewer recorded the names of the new schools and the instrument randomly selected one of the schools to participate in SASS. When the split resulted in more than three schools, the new school names were sent to the Demographic Statistical Methods Division (DSMD) to select the SASS school. If a school other than the original school was selected, new questionnaires were labeled and sent to that school. However, this occurred after the initial mailout, and so the original school had already received questionnaires that were no longer considered valid for the survey.

A note was entered into ATAC to ensure that a warning would pop up if forms from the original, no longer valid school were checked-in. However, sometimes the split was not discovered until after the school had already returned one or more forms. It was most problematic when the TLF had been returned, because in some cases teacher sampling had already occurred and teacher questionnaires were mailed out to the original school.

There were about 30 cases that had to be investigated and tracked to ensure only information from the newly selected school was collected. In some cases, Census Bureau analysts manually deleted teacher information from the original school. These discrepancies were all corrected during the early phases of data collection.

## Data Capture and Imaging

The 2007–08 SASS data were captured (converted from paper to electronic format) using a combination of manual data keying and imaging technology, both of which were facilitated by the Integrated Computer Assisted Data Entry (iCADE) system. Prior to data capture, keying programs were developed for each SASS questionnaire. Images of these forms were captured during data entry, and these image files were used during the analyst data review steps of data processing to view the actual questionnaires online.

When the SASS questionnaires were received and checked-in by the Census Bureau clerical processing staff, they were entered into the iCADE system for control purposes and grouped into batches by questionnaire type for data capture and imaging. The batches of questionnaires were disassembled using a guillotine, and each duplex page was scanned. At the conclusion of the scanning process, the iCADE control system matched the number of imaged pages with the number of pages expected for each questionnaire type. If there was a discrepancy between the images scanned and the number of pages expected, a series of screens was presented to clerical staff, enabling a clerk or supervisor to either accept the batch as it was or to pull it from processing until the issue was resolved.

The batches that were accepted after the scanning process go to the next stages of data capture: auto registration, Optical Mark Recognition (OMR), and manual registration. During auto registration, all of the scanned images were read into the server by their barcodes, which then identified each page in the batch. Once the pages were identified, the OMR server could then read and recognize the presence of answer marks in the boxes next to pre-coded, categorical items. The OMR server was programmed with the locations of the answer boxes for pre-coded items prior to data capture. The program automatically entered the appropriate data into the OMR script file for that questionnaire.

During auto registration and OMR, a number of things could have potentially gone wrong. For example, if the system was unable to read a barcode, then it was not able to identify the questionnaire ID. If the

system was unable to recognize a page corner point, it did not know which questionnaire page it was on and thus OMR was not able to occur. Finally, occasionally there were checkbox ambiguities due to marks outside of a checkbox, scratch outs, or random marks on a page. If any of these three scenarios occurred, the batch automatically went through the manual registration phase of data capture, during which a series of screens was presented to clerical staff, enabling a clerk or supervisor to resolve the issue by manual repair. If there were no problems during the auto registration and OMR, this manual registration step was skipped altogether.

The next stage of data capture was a data quality check of the OMR responses, referred to as the Optical Mark Analysis (OMA) Sample Verification. During this check, a percentage of blank OMR fields and nonblank OMR fields were sampled so that clerks could verify the output from OMR. A random number was generated at the starting point for both blank and nonblank fields within a batch. Then, the system began at a randomly generated number and took every  $X^{\text{th}}$  field for the blank fields. A similar procedure was used for the nonblank fields, and all sampled fields were added to an OMA data file. This OMA data file was then sent to a verification clerk who verified the validity of the OMA output. The verification clerk was presented with an image of the sample fields and was instructed to enter the response (if any) that he or she found in each field.

The system computed error rates for both the blank and nonblank fields. An error occurred when the clerk's field verification differed from the OMR recognition. When differences were found, the batch sample was forwarded to a second clerk, an Adjudicator, who was then required to provide an interpretation of the marks with differences. When the Adjudicator had made a decision and the data had been adjusted if necessary, the batch was marked as finished and was then checked for batch completeness.

Once all of the OMR data were captured correctly and verified as necessary, all write-in fields (e.g., open-ended, numeric, and character fields) were captured by a process called Key from Image (KFI). Keyers were presented with fields to key based on whether the server detected a "Presence" in an answer field. Prior to data capture, the server was programmed where to look for the presence of answer marks for items that were not pre-coded. The keyer either keyed the data present in the field or indicated that the field was blank.

The next stage of data capture was a data quality check of the KFI responses, referred to as Analyze KFI. During this check, a percentage of nonblank KFI fields were sampled so that clerks could verify the output. A random number was generated at the starting point for nonblank fields within a batch. Then, the system began at the randomly generated number and took every  $X^{\text{th}}$  field for the nonblank fields and all sampled fields were added to a KFI data file. This KFI data file was then sent to a verification clerk who would verify the validity of the KFI output. The verification clerk was presented with an image of the sample fields and was instructed to enter the response, if any, that he or she found in each field. This clerk was not provided with the data entered by the original keyer.

The system compared the KFI entry from the first entry and the verification entry. The fields with differences were flagged in the KFI script file. In addition, the system computed error rates for the nonblank fields. An error occurred when the clerk's field verification differed from the original KFI entry. Errors were classified into a number of categories, based upon the keying error situation.

For these cases where there was a difference, the batch KFI script file was forwarded to a third clerk, an Adjudicator, who was required to provide an interpretation of the marks with differences. The Adjudicator could (1) agree with the keyer, (2) agree with the verifier, or (3) provide his or her own interpretation of the respondent's answer. The Adjudicator then classified the error into a number of categories based on the keying error situation; this classification served as the final classification. Once

the Adjudicator had made a decision and the data had been adjusted if necessary, the batch was marked as finished and released to the sponsor.

## Reformatting

As the SASS questionnaire data were being captured, waves of output files were reformatted into SAS datasets in order to facilitate the remaining data processing and cleaning. Once these waves of output files were reformatted, they were sent to Census Bureau analysts weekly for data review.

The Public School Questionnaire (With District Items) (SASS-3Y) was distributed to school district institutions with only one school, BIE schools, public charter schools operating within regular school districts, and independent charter schools that are not affiliated with regular school districts.

The SASS-3Y included items from both the School Questionnaire and the School District Questionnaire<sup>16</sup> and was distributed to schools where there either was no known school district or the school and the district were functionally the same. Therefore, district-level data were collected on either the SASS-3Y or the School District Questionnaire (SASS-1A). Likewise, public school-level data were collected on either the SASS-3Y or the Public School Questionnaire (SASS-3A).

Following the reformat of the 1A, 3A, and 3Y data, the school district items that appeared on the 3Y questionnaire were split out from the 3Y data file and included with data from the School District Questionnaire. The school items that appeared on the 3Y questionnaire were split out from the 3Y data file and were included with data from the Public School Questionnaire. Data remained on these files throughout all stages of data processing, until the final files were created.

## Data Review

As soon as Census Bureau analysts began receiving waves of SASS data, the data review process began. The overall goal of the data review process was to make sure that the final datasets contained clean, accurate data and that there were no .n (not answered) items on any questionnaire records in the final data files.

During the data review process, analysts looked at the frequencies data, source code by source code (or groups of source codes, as necessary) in order to observe the changes that occurred in the data throughout the different stages of data processing. These data processing steps, which are outlined and discussed further in this document, include: a preliminary interview status classification; a series of computer edits that check that the data are in range, consistent throughout a questionnaire record, and follow the correct skip pattern; a final interview status classification; and a set of imputation stages, during which any remaining “not answered” survey items were imputed.

By reviewing the frequency counts of data items at each stage of data processing, analysts were able to make sure that the edit and imputation programs were working correctly; that is, that they were doing

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<sup>16</sup> All of the SASS-3A items appeared on the SASS-3Y questionnaire, while not all of the SASS-1A items appeared on the SASS-3Y questionnaire. Items that pertain only to school districts were not included on the SASS-3Y. Specifically, these items include those concerning: principal hiring, training, and contract information; principal salary schedules; district-wide staff members; district performance; school choice within districts; and migrant education. For more information about how these items are treated during processing, please see the “Final File Imputation Table for School Districts” section of chapter 8. A crosswalk containing the specific district items that were not included on the SASS-3Y can be found in appendix U.

what analysts intended for them to do. The data review also helped to ensure that the imputed values seemed consistent with the other data on the questionnaire record.

Another reason that Census Bureau analysts examined frequencies of each data item at each stage of data processing was to identify any suspicious values (e.g., if an item's response was outside the range of possible answer choices or if an answer seemed unlikely given the respondent's other responses in the survey). Occasionally, they looked at the image of the questionnaire page to verify that the data were keyed correctly. Appropriate fixes were made to the data files when necessary.

During the data review process, analysts may come across items with poor data quality. During the 2007–08 administration of SASS, staff discovered that item 30 (a0200–a0205) on both the Principal and Private School Principal Questionnaires had data reporting and data quality problems. This item asked principals to categorize the teachers in their school by the following: outstanding teachers, good teachers, fair teachers, and unsatisfactory teachers. The “fair” and “unsatisfactory” teachers were broken down further into the number of these teachers who were tenured.

Analysts found a large amount of inconsistency between the counts of teachers provided in item 30 by principals and the teacher count data provided on the corresponding school's questionnaire. In addition, many respondents erroneously reported more tenured fair and unsatisfactory teachers than the corresponding total number of teachers for these two categories. These items were dropped from the principal data files and were not included in data processing during the computer edits and imputation stages.

## **Preliminary ISR Classification**

The preliminary Interview Status Recode (ISR) was a preliminary determination of whether each case was an interview, a non-interview, or was out-of-scope for SASS. In general, cases with an “out-of-scope” outcome code that had been assigned during data collection were classified as out-of-scope (ISR = 3) for the preliminary ISR. Otherwise, cases with data entries were classified as completed interviews (ISR = 1). Cases with no data and cases where the district or school had refused were classified as non-interviews (ISR = 2). A more detailed discussion of interview status can be found in the Final Interview Status Edit section later in this chapter.

## **Computer Edits**

After the preliminary ISR classification, all files were submitted to a series of computer edits. These edits consisted of a range check, a consistency edit, and a blanking edit.

The first of the computer edits was the range check. The range check was used to delete entries that were outside the range of acceptable values that were set prior to the administration of SASS.

Actual changes to the data were made during the consistency edit. The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, the entries were deleted. These inconsistencies were:

1. within items (e.g., if the response to the “Yes/No” part of School Questionnaire item 35—whether or not any students enrolled in the school have an Individual Education Plan (IEP) because they have special needs—was “No,” but the number of students that have an IEP was greater than zero for the second part of the item); or

2. between items (e.g., if School Questionnaire item 43 indicated that the school does not have any students receiving Title I services, but one or more students were reported as participating in this program in item 44).

In addition, the consistency edits filled in some items where data were missing or incomplete by using other information on the same data record. For example, if some parts of School Questionnaire item 5—student enrollment counts by race—had entries, and the sum of those parts was greater than or equal to the school’s total enrollment, then a zero entry was put in each part that was unanswered during the consistency edit.

The blanking edits deleted extraneous entries (e.g., in situations where skip patterns were not followed correctly) and assigned the “not answered” (.n) code to items that should have been answered but were not.

The only records that were put through the series of edits were those classified as interviews in the preliminary ISR. The tables in “Appendix Q. Quality Assurance for Data Capture and Mailout Operations” show the number of edit changes made to entries for each of the variables within each data file. For information about how the data files were created from the questionnaire data, see the Preliminary Data Products section, at the end of this chapter. These changes are summarized in table 52.

**Table 52. Summary of changes made to variables in the computer edits, by data file: 2007–08**

Data file	Total number of complete interviews (ISR = 1)	Total number of variables in questionnaire <sup>1</sup>	Number of variables changed during edits by percent of records on which the variable was changed			
			None	1–15 percent	16–30 percent	More than 30 percent
Public School District	4,601	123	64	57	1	1
Public School Principal	7,459	176	141	33	0	2
Private School Principal	1,891	157	123	30	2	2
BIE School Principal	133	176	149	21	4	2
Public School	7,572	193	83	82	5	23
Private School	1,968	318	216	99	3	0
BIE School	131	237	149	61	4	23
Public School Teacher	38,240	380	176	200	2	2
Private School Teacher	5,999	408	198	208	2	0
BIE School Teacher	556	380	239	134	6	1
Public School Library Media Center	7,276	62	30	30	1	1
BIE School Library Media Center	123	62	36	22	4	0

<sup>1</sup> The count of the total number of variables in the questionnaires for public, private and BIE school principals does not include item 30, which was dropped from data processing.

NOTE: BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

## Final Interview Status Edit

After the range checks, consistency edits, and blanking edits were completed, the records were put through an edit to make a final determination of whether the case was eligible for the survey and, if so, whether sufficient data had been collected for the case to be classified as a completed interview. A final interview status recode (ISR) value was assigned to each case as a result of this edit.

### 1. School District Survey (SASS-1A)

A case was classified as **out-of-scope** (ISR = 3) if

- the agency named on the questionnaire label was not a school district or other local education agency; or
- the district named on the questionnaire was no longer in operation; or
- the district did not serve any students in grades 1–12 or comparable ungraded levels.

A case was classified as an **interview** (ISR = 1) if

- none of the conditions for out-of-scope cases was met; and
- the number of students in K–12 and comparable ungraded levels in the district was reported (D0276); and
- the total number of FTE teachers employed by the district was reported (D0289); and
- there were data in at least 10 percent of the remaining items [11 items for the School District Questionnaire, 8 items for the Public School Questionnaire (With District Items)].

A case was classified as a **non-interview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

### 2. School Principal Surveys (Forms SASS-2A and -2B)

A case was classified as **out-of-scope** (ISR = 3) if

- the school named on the questionnaire label was classified as out-of-scope; or
- the school had no principal, headmaster, or administrator.

A case was classified as an **interview** (ISR = 1) if

- neither of the conditions for out-of-scope cases was met; and
- the respondent had reported the total number of years served as a principal of his/her current school as well as any other school (A0025) or the respondent had reported the total number of years served as principal at the school where she/he is currently principal (A0026); and
- there were valid entries in at least five of these items:
  - years of elementary or secondary teaching experience before becoming a principal (A0027);
  - years of elementary or secondary teaching experience since becoming a principal (A0028);
  - highest degree earned (A0032);
  - gender (A0240);
  - Hispanic origin (A0241);
  - race (A0242–A0246);
  - year of birth (A0248); and

- there were data in at least 10 percent of the remaining items (17 items for the Principal Questionnaire, 15 items for the Private School Principal Questionnaire).

A case was classified as a **non-interview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

### 3. Public School Survey (Forms SASS-3A and -3Y)

A case was classified as **out-of-scope** (ISR = 3) if

- the school named on the questionnaire was not in operation during the 2007–08 school year; or
- the school did not serve students in any of grades 1–12 or comparable ungraded levels; or
- the institution named on the questionnaire was not a public school.

A case was classified as an **interview** (ISR = 1) if

- none of the conditions for out-of-scope cases was met; and
- the K–12 student enrollment was reported (S0039); and
- the number of teachers working at the school was reported (S0120 and/or S0121) or the count of teachers from the Teacher Listing form was greater than zero; and
- there were data in at least 10 percent of the remaining items (18 items).

A case was classified as a **non-interview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

### 4. Private School Survey (Form SASS-3B)

A case was classified as **out-of-scope** (ISR = 3) if

- the school named on the questionnaire was not in operation during the 2007–08 school year; or
- the school did not serve students in any of grades 1–12 or comparable ungraded levels; or
- the institution named on the questionnaire was not a private school.

A case was classified as an **interview** (ISR = 1) if

- none of the conditions for out-of-scope cases was met; and
- the total student enrollment was reported (S0434); and
- the number of teachers working at the school was reported (S0120, S0520-S0524) or the count of teachers from the Teacher Listing form was greater than zero; and
- there were data in at least 10 percent of the remaining items (29 items).

A case was classified as a **non-interview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

### 5. Teacher Surveys (Forms SASS-4A and -4B)

A case was classified as **out-of-scope** (ISR = 3) if

- the school from which the teacher was sampled was classified as out-of-scope by the Teacher Listing Form instrument; or

- the teacher no longer worked at the school named on the questionnaire (e.g., he/she transferred to another school, left teaching, retired or was deceased); or
- the person named on the label was a short-term substitute teacher, student teacher, or teacher's aide; or
- the person named on the label was not a teacher; or
- the person named on the questionnaire label had never worked at the school;
- the person named on the questionnaire worked at the school but did not teach any classes (e.g., he/she was an assistant principal, counselor, or librarian); or
- the teacher moved out of the United States.

A case was classified as an **interview** (ISR = 1) if

- none of the conditions for out-of-scope cases was met; and
- the respondent reported either his/her position at the school (T0025) or his/her full- or part-time teaching status in the school (T0028); and
- the respondent reported either the year that he/she began teaching in the school where he/she was selected for the survey sample (T0036) or the year he/she began full- or part-time teaching at the elementary or secondary level (T0037); and
- at least one grade level of students taught by the respondent was reported (T0050–T0064); and
- the respondent reported his/her main teaching assignment field (T0067 or T5067); and
- the respondent reported whether he/she had a college degree (T0110 or T0120 or T0124); and
- there were data in at least 10 percent of the remaining items (29 items for the SASS-4A, 31 items for the SASS-4B).

A case was classified as a **non-interview** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

## 6. School Library Media Center Survey (Form LS-1A)

A case was classified as **out-of-scope** (ISR = 3) if

- the school named on the questionnaire was classified as out-of-scope; or
- the school did not have a library.

A case was classified as an **interview** (ISR = 1) if

- neither of the conditions for out-of-scope cases was met; and
- there were data in at least 10 percent of the remaining items (6 items).

Cases were classified as **non-interviews** (ISR = 2) if an eligible case did not meet the requirements to be an interview case.

The preliminary ISR and final ISR counts for each data file and the percent of change for each ISR classification are shown in table 53. For information about the file creation from the questionnaire data, see the Preliminary Data Products section, at the end of this chapter.

**Table 53. Preliminary and final interview status recode (ISR) counts and percent change, by data file: 2007–08**

Data file	Sample size	Preliminary ISR			Final ISR			Percent change in ISR status		
		Number of interviews	Number of non-interviews	Number of out-of-scope	Number of interviews	Number of non-interviews	Number of out-of-scope	Interviews	Non-interviews	Out-of-scope
Public School District	5,248	4,643	498	107	4,601	533	114	-0.90	7.02	6.54
Public School Principal	9,795	7,650	1,736	409	7,459	1,924	412	-2.50	10.83	0.73
Private School Principal	2,937	1,977	651	309	1,891	736	310	-4.35	13.06	0.32
BIE School Principal	178	137	32	9	133	35	10	-2.92	9.38	11.11
Public School	9,795	7,591	1,814	390	7,572	1,833	390	-0.25	1.05	0.00
Private School	2,937	2,023	623	291	1,968	678	291	-2.72	8.83	0.00
BIE School	178	131	39	8	131	39	8	0.00	0.00	0.00
Public School Teacher	47,603	39,110	6,464	2,029	38,240	7,313	2,050	-2.22	13.13	1.03
Private School Teacher	8,231	6,193	1,583	455	5,999	1,769	463	-3.13	11.75	1.76
BIE School Teacher	750	582	110	58	556	133	61	-4.47	20.91	5.17
Public School Library Media Center	9,795	7,295	1,549	951	7,276	1,564	955	-0.26	0.97	0.42
BIE School Library Media Center	178	125	33	20	123	33	22	-1.60	0.00	10.00

NOTE: BIE refers to the Bureau of Indian Education. The Teacher Listing Form did not have a separate final ISR step.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

## Creating Imputation Flags

After the final ISR edits, there were still several cases with “not-answered” values on the data files for some variables. Values were created for these items in the next step of the processing, imputation, which is described in detail in “Chapter 8, Imputation Procedures.” Exhibit 7 includes the naming convention for flags created to identify changes made to the data during the consistency edit and imputation stages.

**Exhibit 7. Flags used in processing SASS questionnaires, by processing step: 2007–08**

Processing step	Flag variables	Flag values and definitions	
Consistency edit	ef_[source code] + 1 (e.g., ef_s0100 + 1)	†	
Imputation specs	f_[source code] = (e.g., f_s0100 = 7)	0	Data reported. Not imputed
		1	Original value was ratio adjusted to be consistent with another value on questionnaire
		2	For all SASS questionnaires, value was imputed by using data from other variables in same questionnaire; and For Private School Questionnaire only, value was imputed by using data within the same questionnaire, from the 2005–06 PSS or the PSS sample file
		3	Value was imputed by using data from another associated questionnaire (principal record, district record, school record or Teacher Listing Form)
		4	Value was imputed by using data from the sample file (2005–06 CCD for nonteachers or Teacher Listing Form for teachers)
		7	Item was imputed by using data from the record for a similar case (donor)
		8	Item was imputed by using the mean or mode of data for groups of similar cases
		9	Data value was adjusted during analysts' post-imputation review of data

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School Principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Documentation Data Files,” 2007–08.

The 2007–08 school year was a survey year for both the SASS and the Private School Survey (PSS). The SASS Private School Questionnaire collected all of the PSS data, in addition to some SASS school data, so that private schools selected for the SASS data sample would not be asked to complete two separate questionnaires.

Items 1–5a–e, 7, 9–10, 14–17, 19–22, 41–44, 70–71, and 73–78 were all “PSS Items” and were processed with the PSS data files. For the purpose of imputation, PSS items are defined as any item collected for the PSS that remains on the SASS private school record. The imputation procedures for the Private School Questionnaire are described in greater detail in chapter 8 in the Imputation Procedures for the Private School Questionnaire (Form SASS-3B) section. The imputation flag values were the same for the Private School Questionnaire and the other SASS questionnaires, with the exception of imputation flag value 2, as noted above.

## Preliminary Data Products

After all stages of imputation were completed and the blanking and consistency edits were run once again, the data were still split into data files by questionnaire type (i.e., School District, Principal, School, Teacher, and School Library Media Center). Twelve data files were created from the questionnaire data files so that the data could be categorized by school type (i.e., public, private, and BIE). The sixth digit of each respondent's unique control number was used to separate BIE-funded schools from the data files, because a sixth digit of a "3" indicates a BIE-funded school.

### *Public School District (doc\_District)*

The public school district final file includes all items from the School District Questionnaire (Form SASS-1A). It also includes the district items included on the Public School Questionnaire (With District Items) (Form SASS-3Y) for non-BIE cases; these items can be found on both questionnaires and include topics such as student enrollment, recruitment and hiring of staff, and teacher compensation. It does not include the district items for public charter schools governed by school districts.

### *Public School Principal (doc\_PubPrinc)*

The public school principal final file includes all items from the Principal Questionnaire (Form SASS-2A) for all principals from non-BIE-funded schools.

### *Private School Principal (doc\_PriPrinc)*

The private school principal final file includes all items from the Private School Principal Questionnaire (Form SASS-2B).

### *BIE School Principal (doc\_BIEPrinc)*

The BIE school principal final file includes all items from the Principal Questionnaire (Form SASS-2A) for all principals from BIE-funded schools.

### *Public School (doc\_PubSch)*

The public school final file includes all items from the School Questionnaire (Form SASS-3A). It also includes the school-level items from the Public School Questionnaire (With District Items) (Form SASS-3Y) for non-BIE-funded schools.

### *Private School (doc\_PriSch)*

The private school final file includes all items from the Private School Questionnaire (Form SASS-3B).

### *BIE School (doc\_BIESch)*

The BIE school final file includes all items from the Public School Questionnaire (With District Items) (Form SASS-3Y) for all BIE-funded schools.

*Public School Teacher (doc\_PubTea)*

The public school teacher final file includes all items from the Teacher Questionnaire (Form SASS-4A) for all teachers from non-BIE-funded schools.

*Private School Teacher (doc\_PriTea)*

The private school teacher final file includes all items from the Private School Teacher Questionnaire (Form SASS-4B).

*BIE School Teacher (doc\_BIETea)*

The BIE school teacher final file includes all items from the Teacher Questionnaire (Form SASS-4A) for all teachers from BIE-funded schools.

*Public School Library Media Center (doc\_PubLibr)*

The public school library media center final file includes all items from the School Library Media Center Questionnaire (Form SASS-LS1A) for all non-BIE-funded schools.

*BIE School Library Media Center (doc\_BIELibr)*

The BIE school library media center final file includes all items from the School Library Media Center Questionnaire (Form SASS LS-1A) for all BIE-funded schools.

Each of these data files included all variables, including frame variables, survey variables, created variables, weighting variables, and imputation flags. These files were used as the source files for the documentation files and the restricted-use files. The documentation files were used to run the unit and item response rates and contain all sampled cases and the base weights in addition to the final weights. The restricted-use files contain only the respondents' records, and processing variables and most sampling variables were removed. In addition, the documentation files and restricted-use files were altered to meet the requirements of data nondisclosure. (See chapter 11 for additional description of the restricted-use data files.)

## Chapter 8. Imputation Procedures

During the computer edit stage of data processing, extraneous entries were deleted (e.g., in situations where skip patterns were not followed correctly) and the “not answered” (.n) code was assigned to the items that should have been answered but were not. These “not answered” items that still remained were eligible for imputation after the computer edit stage of processing was complete.

In order to fill “not answered” items with data, questionnaires were put through two separate stages of imputation. With each stage, larger assumptions were made about how the participant might have responded. The first stage of imputation involved using items from either the same questionnaire or other questionnaires from the same school or district to impute missing items. The second stage of imputation included both “hot deck” imputation (establishing donor records and using them to impute data) and imputation by using the mean or mode for groups of similar cases (donor groups) to impute missing data. Once the first two stages of imputation were complete, there were no more unanswered items. At this point, Census Bureau analysts performed checks on the imputed data to make sure that it was consistent with other data on the same record. For a small number of cases where imputed data were either inconsistent with other data on the same record or appeared to be outlier data, analysts made adjustments to the imputed data during a post-imputation data review process.

### Overview of Imputation Procedures

As questionnaires went through the different stages of imputation, a numerical flag corresponding to the stage of imputation and type of imputation was assigned to each imputed item. By looking at the flag values, data users are able to identify which items were imputed and how the imputations were performed. The data user can use this imputation flag to decide whether or not to include imputed data in his or her analysis and which types of imputed data to employ.

#### First-Stage Imputation

In the first stage of imputation, missing (not answered) survey data were imputed with a valid response using data from other items on the same questionnaire or from other related data sources. In addition, data were ratio adjusted in some circumstances so that items were consistent with one another. For example, if the counts of students by race on a school questionnaire did not sum to the reported total enrollment, the ratio of each race to the total enrollment was preserved, but the actual number was adjusted to be consistent with the total enrollment figure.

There were four different sources for stage one imputations, and each was given a particular flag value. The definitions of these flag values are as follows:

- 0 Data reported. Not imputed.
- 1 Item was ratio adjusted to be consistent with another item on the questionnaire.
- 2 Item was imputed based on data from another item within the same questionnaire.
- 3 Item was imputed based on data from another questionnaire associated with the same school or school district.
- 4 Item was imputed from the sample file (2005–06 Common Core of Data or Teacher Listing Form).

Both the Private School Survey (PSS) and SASS were conducted during the 2007–08 school year. The SASS Private School Questionnaire collected the same items that are present on the PSS, plus additional

SASS school data, for the private schools included in the SASS sample. The PSS data that were collected on the SASS Private School Questionnaire were processed jointly as part of the PSS processing.

As a result, the PSS items on SASS received the same imputation as PSS. Because the types of imputation methods used by PSS and SASS were the same, these items received the same imputation flags that were used in SASS. There was one exception to this. PSS used one method of imputation that was not used for SASS. Since PSS is conducted every 2 years and the sample includes all private schools in the United States, analysts were able to use data from the previous PSS (2005–06) to impute data for missing items. The flag value given to identify this type of imputation was a “2.” In other words, a flag with an imputation value of “2” on the private school data file is defined slightly differently from the way it is defined on all other data files. It is defined as follows:

- 2 Item was imputed based on a value from within the same questionnaire, from the 2005–06 PSS, or the PSS sample file.

## **Second-Stage Imputation**

Several different approaches were used in the second stage of imputation. Data were imputed from items found on questionnaires of the same type that had certain characteristics in common or from the aggregated answers of similar questionnaires. These records are called “donor records,” and the method of imputation that involves imputing data from donor records is called “hot deck” imputation.

If the donor, or “hot deck,” imputation was unsuccessful in finding an appropriate donor, an additional method of imputation was employed during the second stage of imputation. This second method is known as mean or mode imputation, during which data are imputed from the mean or mode of data found on questionnaires of the same type among respondents who have certain characteristics in common. This mean and mode imputation was implemented only as a final method of imputation and on an as-needed basis. Consequently, this type of automated imputation was only used for the imputation of the public and private school teacher data.

A small number of items on the School District Questionnaire and the Principal Questionnaire for public and BIE school principals were imputed with the mean or mode of responses from similar respondents to these questionnaires. However, this process was not automated as it was for the public and private school teacher data, but was implemented during the post-imputation processing by analysts on an as-needed basis. All other data that were still missing by the second stage of imputation were resolved with “hot deck” imputation.

When a missing item was imputed from a donor record and the donor answered using the “other” option, the write-in “please specify” portion was not imputed. In addition, none of the write-in items (e.g., open-ended items) were imputed from donor records. Many of the write-in items ask for information that is very specific to each respondent. For instance, item 24 on the Teacher Questionnaire asks the name of the college or university in which the respondent earned his or her degree. Items such as these were not imputed and were left unanswered on the final data files (i.e., given a value of -9 for missing data). However, there were a few unintended exceptions to the general rule of not imputing write-in items on the teacher data files as well as the public and BIE school data files. These exceptions occurred during data processing and were the result of coding errors and of data blanked during the analyst review stage. Please refer to appendix R for more details on these exceptions.

All items that were imputed during the second stage of imputation using “hot deck” imputation based on survey data or SASS frame data were assigned an imputation flag of “7.” Items imputed using mean or

mode imputation during stage two imputation or during post-imputation processing were assigned an imputation flag of “8.”

### ***“Hot Deck” Imputation***

During hot deck imputation, responses were determined by establishing a donor record and then basing imputation on data found within the donor record. Donors were selected based on their answers to specified items called “matching variables.” If two respondents answered the selected matching variables in similar ways, then it was assumed that they were comparable and that imputation of one data item from the other was reasonable.

The matching variables used to establish donor relationships were selected based on the type of data the donor would supply to the record undergoing imputation. For example, since a respondent’s answer to a given item may be influenced by the school’s enrollment and the proximity of the school to a metropolitan center, these variables were used to find another respondent in a school with similar characteristics.

Before the matching variables were used to determine appropriate donor records, the data files were sorted by a selection of matching variables in the order of their importance. Sorting the data helped to ensure that appropriate donors that were the most similar to the record with the unanswered data would be selected. Sorting accomplished this in two ways.

First, in many cases, the donor and imputed records were required to have the same answers on key variables. For example, for public school sector records, donors needed to be from the same state or group of states<sup>17</sup> as the record with missing data, and for private school sector records donors needed to have the same religious affiliation, or matching strata, as the record with missing data. Second, sorting the data ensured that records with similar characteristics were adjacent in the data file. This made the imputation programs run more efficiently because the data were ordered such that similar data were close to one another.

Once the data files were sorted by the appropriate sort variables, each item on each questionnaire was assigned a group of matching variables along with a routine describing the hierarchy of importance of each of the matching variables in determining an appropriate donor. The matching variables were chosen and ordered to ensure that the donors chosen were the most similar to the record with the unanswered data and therefore the best donors possible.

For example, on the Principal Questionnaire, item 42 asks for the principal’s birth year. If the respondent left this item blank, then the most important variable in predicting its value would be the number of years as a principal in any school (YEARPRIN), followed by the highest degree that he or she has earned (DEGREE) and the grade levels offered by the school (NLEVEL). Therefore, the ordered matching variables were YEARPRIN, DEGREE, NLEVEL. However, item 20 concerns the frequency at which a number of problems occur at the school, an area in which the number of years as a principal and the highest degree that he or she has earned would not be useful predictors. Instead, the grade levels offered by the school (NLEVEL) would be the most important indicator, followed by the type of school at which the respondent served as principal (TYPE), and the proximity of the respondent’s school to a metropolitan center (URB). Therefore, the ordered matching variables for this item would be NLEVEL, TYPE, URB.

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<sup>17</sup> STGROUP classifies states into 23 groups according to their geographic locations and school system similarities. STGROUP is used, rather than the school’s specific state, because there are occasional problems with finding appropriate donor records for records with unanswered items for schools in small states.

When there were not enough donor records within any given stratification cell of perfectly matched matching variables, a collapsing routine was instituted for each individual matching variable. This was done to make sure that values that were not consistent with other data on the same record would not be imputed simply because a record was close to the boundary between the stratification cells (e.g., there were other records that were suitable donors or the record was not similar enough to be a donor).

For example, for the Public School Questionnaire, the collapsing routine for the matching variable MINEN<sup>18</sup> (percentage of enrolled students in the school who are of a racial/ethnic minority) was as follows:

(1,2,3,4,0,  
2,3,1,4,0,  
3,2,1,4,0,  
4,3,2,1,5,  
5,4,0,0,0)

If the value for MINEN on the record with missing data was 1 and there was no available donor where MINEN = 1, the collapsing program looked for a donor where MINEN = 2. If there was still no available donor, the program looked for a donor where MINEN = 3, then MINEN = 4. It did not look for cases where MINEN = 5. Likewise, if the value for MINEN on the record with missing data was a 3 and there was no available donor where MINEN = 3, the collapsing program searched for a donor where MINEN = 2, then MINEN = 1, and then MINEN = 4. When the collapsing routine hit 0, there was no donor available for this case. In these instances, the value was imputed based on the mean or mode of matching groups of surveys.

Once the donor relationship was established, the donor record provided data items either directly or indirectly to the imputed record. For example, the unanswered item requesting the “number of white, not of Hispanic or Latino origin, students” was filled by accepting the ratio of white students to total students from the donor record and by applying that ratio to the total number of students on the imputed record.

Finally, to prevent a single record from having an undue impact on the data, a record could only be used as a donor a maximum of five times. There were no exceptions to this procedure.

Data imputed during the stage two “hot deck” imputation were given imputation flags of value “7.”

### ***Mean and Mode Imputation***

During mean and mode imputation, responses were imputed by establishing groups of similar questionnaires (donor groups) and then imputing for a particular item by substituting either the mean (the average of all the responses for that item) or mode (the response that occurs most frequently) of the same data item within that established donor group. Donor groups were selected based on respondents’ data for specified items called “matching variables.” If several respondents answered the selected matching variables in the same manner, then it was assumed that imputation of one data item from the mean or mode of the cases within the similar group was reasonable. The mode of responses within a donor group was used for the categorical items, while the mean was used for continuous items.

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<sup>18</sup> MINEN = 1 if the percentage of students in school who are of a racial/ethnic minority was less than 5.5 percent. MINEN = 2 if the percentage was between 5.5 percent and 20.5 percent. MINEN = 3 if minority enrollment was between 20.5 percent and 50.5 percent. MINEN = 5 if the percentage was greater than or equal to 50.5 percent. MINEN = 4 if the percentage was unclassified.

There was one matching variable used to establish donor groups for mean and mode imputation. Across all items that used mean and mode imputation on all SASS surveys, this item was STGROUP.<sup>19</sup> The imputation program searched for the group of records within the same state group and, once this donor group was established, the mean or mode of the data for that item was copied to the record with the unanswered item.

Data imputed during the stage two mean and mode imputation were given an imputation flag of value “8.”

## **Post-Imputation Processing**

Following both the first and second stages of imputation, the computer edits were re-run and any remaining data issues were resolved (see chapter 7 for details). These edits were used to ensure that the values imputed in each stage of imputation were within acceptable ranges and were consistent with other items on the same questionnaire. In a very small number of cases, an imputed value was blanked out by one of these computer edits due to inconsistency with other data within the same questionnaire or because it was out of the range of acceptable values. In these situations, Census Bureau analysts looked at the items and tried to determine an appropriate value based on a number of factors. Census Bureau analysts reviewed

- the original image of the questionnaire to see if the respondent had made any notes in the margin that might provide insight;
- other items within the same record with related information;
- similar cases to get an understanding of what the respondent might have answered; and/or
- means and modes of similar sub-samples.

When analysts changed or added data for any reason during the post-imputation data review, an imputation flag with a value of “9” was set to indicate this. However, there were a few exceptions. A small number of items on the School District Questionnaire and the Principal Questionnaire for public and BIE school principals were imputed with the mean or mode of responses from similar respondents to these questionnaires during the post-imputation processing by analysts on an as-needed basis. An imputation flag with a value of “8,” indicating imputation during stage two mean and mode imputation, was assigned for these items, rather than an imputation flag value of “9.”

Once this analyst review was complete, any items that were imputed at a rate greater than 15 percent were analyzed as part of the item bias analysis (see chapter 6 for details about nonresponse bias analysis).

## **Imputation Procedures for the School District Questionnaire (Form SASS-1A) and for District-Level Items From the Public School Questionnaire (With District Items) (Form SASS-3Y)**

School district-level data were collected either on the School District Questionnaire (SASS-1A) or the Public School Questionnaire (With District Items) (SASS-3Y). The SASS-3Y questionnaire was distributed to school district institutions with only one school and to public charter schools and included items from the School Questionnaire and the School District Questionnaire in order to simultaneously collect information on the school district and the single school administered by that school district. The one-school districts included both independent public charter schools and public charter schools operated by school districts. District-level data for public schools in these one-school districts were kept in the

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<sup>19</sup> STGROUP classifies states into 23 groups according to their geographic locations and school system similarities.

same data file as the SASS-1A district data and received the same data processing as a result. For the final data files, district-level data from public charter schools operated by school districts that were collected on the SASS-3Y questionnaire were removed. These data will be available on a separate data file that will be released in the future. For more information on how these public charter schools are handled on the Public School District Data File, see chapter 11.

Items on the School District Questionnaire that still were “not answered” went through a first stage of imputation in which unanswered items were imputed from other items on the same record or items on the district’s sample file (including the CCD). The district questionnaires then went through the second stage of imputation, or hot deck imputation, in which some of the remaining “not answered” items were filled using the data record from a similar record.

## **First-Stage Imputation for School District Data**

In the first stage, unanswered items from the School District Questionnaire were filled in whenever possible using information about the district from the following sources:

- *Other Questionnaire Items on the District’s School District Questionnaire Record.* Based on entries from related questionnaire items, assumptions were made about how the respondent might have answered items. For example, if item 6b, number of prekindergarten students in the district that are approved for free or reduced-price lunches, was blank and item 5, which asks if the district has any prekindergarten students, was answered “No”, then item 6b was imputed “0” prekindergarten students.
- *District’s Sample File Record, Including Data from the 2005–06 CCD.* In some cases, CCD data from the sample file were used to impute entries to items. For example, if item 1a did not indicate that the district offers kindergarten or 1<sup>st</sup> grade through 12<sup>th</sup> grade and item 1b, which asks which grades are offered, was unanswered, then the grades offered were imputed from the sample file data, which was derived from the 2005–06 CCD.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For records where the sum of the entries in item 4 (number of students by race) did not equal the districts’ K–12 enrollment in item 3, the item 4 entries were adjusted to be consistent with item 3. For example, if the sum of the students reported by the racial categories in item 4 differed from the district’s K–12 enrollment reported in item 3, the assumption was made that the total enrollment was correct. Consequently, the difference between the racial counts in item 4 and the total value reported in item 3 was resolved by adding or subtracting the misreported students from each racial category without changing the proportion of each racial group to the total enrollment.

Table 54 includes a summary of imputation performed in stage one processing.

## **Second-Stage Imputation for School District Data**

### **“Hot Deck” Imputation**

In general, the “hot deck” stage of imputation filled in unanswered items by using data from the record of a similar district. For example, districts were similar if they offered the same instructional levels (elementary, secondary, combined), were of similar enrollment size, had a similar percentage of minority students, etc. Imputation variables that describe certain characteristics of the districts (e.g., enrollment

size, school level, and percent minority students) were created and used to sort the records and to match incomplete records to those with complete entries (donors).

For some items, such as item 7, which asks for the number of days in the school year, data were copied directly from the donor record to the record with the missing value. For others, such as item 17 (number of teachers newly hired), the entries on the donor record were used along with other questionnaire data to fill the incomplete items. For example, suppose district A had not answered item 17, number of teachers newly hired, and district B had been established as an appropriate donor for district A. In this case, the ratio of newly hired teachers to the total number of teachers in district B was multiplied by the total number of teachers reported in district A to yield the number that was filled in for the total number of newly hired teachers in district A. Consequently, while district A had the same ratio of newly hired teachers to total teachers as district B, the actual number of newly hired teachers was likely to be different.

The School District Questionnaire records were sorted by the following variables to ensure similarity between the records receiving information and their donors:

STATE	State in which the school district is located
LEVEL	Grade levels offered
URB	Proximity to a metropolitan center
D0276	Total K–12 and ungraded enrollment

For items 2–3, 5–8, 17–19, 21–22, and 25–45 records were sorted by STATE / LEVEL / URB / D0276. For items 4, 9–16, 20, 23–24, and 46–51 the records were sorted by STATE / URB / D0276.

Table 54 includes a summary of the amount of imputation performed in stage two processing.

### ***Final File Imputation Table for School Districts***

District-level data were collected either on the School District Questionnaire (SASS-1A) or the Public School Questionnaire (With District Items) (SASS-3Y). Public schools from one-school districts and public charter schools had their district data collected on the Public School Questionnaire (With District Items) (SASS-3Y) and were imputed with school districts that completed the School District Questionnaire (SASS-1A). The SASS-1A school district items that were not asked on the SASS-3Y questionnaire were assigned a value of “-8,” which indicates they were “Not asked of one-school districts” for the 3Y records [see appendix U for a crosswalk of items on the School District Questionnaire and Public School Questionnaire (With District Items)]. The data for both public schools in one-school districts and independent public charter schools remained on the same school district data file after imputation. Data for public charter schools governed by a school district were removed from the final Public School District Data File and will be released in an upcoming data file.

The number of source codes that were imputed, including district items from the Public School Questionnaire (With District Items), for a given percentage of records during each stage of processing appears in table 54 below. The first column, “Not imputed for any item,” includes items that are not eligible for imputation (e.g., “please specify” write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

**Table 54. Number of source codes imputed by percentage of records receiving imputation and imputation stage for public school districts, including district items from the Public School Questionnaire (With District Items): 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	61	56	6	0
Ratio-adjustment method	109	9	5	0
Stage 2	32	91	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District Restricted Use Data File,” 2007–08.

Appendix R contains the total number of imputations applied at each stage to each source code.

### **Imputation Procedures for the Principal Questionnaires (Forms SASS-2A, -2B)**

Principal data for traditional public, public charter, and BIE-funded schools, collected on the Principal Questionnaire (SASS-2A), were on the same data file when entering the imputation step of data processing. Principal data for private schools, collected on the Private School Principal Questionnaire (SASS-2B), were on a separate data file and were processed separately from principal data from the SASS-2A during all stages of imputation. Items on the principal questionnaires that still had items that were “not answered” went through the first stage of imputation in which unanswered items were imputed from other items on the same principal record or items on the corresponding school record.

During the data review process, analysts discovered that item 30 (a0200–a0205) on both the Principal and Private School Principal Questionnaires had data reporting and data quality problems. This item asked principals to categorize the teachers in their school by the following: outstanding teachers, good teachers, fair teachers, and unsatisfactory teachers. The “fair” and “unsatisfactory” teachers were broken down further into the number of these teachers who were tenured.

Analysts found a large amount of inconsistency between the counts of teachers provided in item 30 by principals and the teacher count data provided on the corresponding school’s questionnaire. In addition, many respondents erroneously reported more tenured fair and unsatisfactory teachers than the corresponding total number of teachers for these two categories. These items were dropped from the principal data files and were not included in data processing during the imputation stages.

After all stages of imputation were completed and there were no more “not answered” items remaining, the BIE-funded school principal data were split from the public school principal data file and placed in a separate data file. Traditional public and public charter school principal data remained on the same data file, while the private school principal data remained in a separate data file.

## First-Stage Imputation for Principal Data

Although the public school principal data and the private school principal data were in two separate data files and were processed separately, they used the same imputation methodologies during the first stage of imputation. In the first stage, items that were unanswered on the principal questionnaires were filled in whenever possible by using information about the principal from these sources:

- *Other Questionnaire Items on the Principal Questionnaire Record.* Based on entries from related items on the principal record, assumptions were made about how the respondent might have answered the item. For example, if there was no response to item 1 (total number of years spent as a principal at this or any school) and item 2 (total number of years spent as principal of the current school) indicated that the respondent had been a principal at the school since he or she was 22 years of age, then it was assumed that the respondent had only been principal of the current school. The answer to item 2 was imputed to item 1.
- *School Questionnaire Record.* Information from the record of the principal's school was used to impute values in the first stage as well. For example, if item 12, on the level of influence that particular groups have on decisions concerning the school, had any section asking about curriculum specialists unanswered and the school record indicated there were no curriculum specialists at the school, then "Not Applicable" was imputed for these items.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For records where the sum of the entries in items 26 and 29 (number of minutes per week spent on different school activities for third and eighth grade students) exceeded the total number of hours in the school week in items 25 and 28, the item 26 and 29 minute entries were adjusted to be consistent with items 25 and 28. For example, if the sum of the minutes by school activity for third grade students in item 26 exceeded the total minutes reported in the third graders school week in item 25, the assumption was made that the school week length was correct. Consequently, misreported minutes for each school subject were subtracted without changing the proportion of minutes by school activity to the total reported minutes by activity.

Table 55 includes a summary of the amount of imputation performed in stage one processing.

## Second-Stage Imputation for Principal Data

### **"Hot Deck" Imputation**

In general, the "hot deck" imputation filled unanswered items using data from the record for a similar principal (e.g., a principal of similar age, experience, education, etc.) who worked at a similar school (e.g., a school that offered the same grade levels, was of the same type [e.g., regular, special program emphasis, special education, career/technical/vocational, alternative], had similar enrollment size, etc.). Imputation variables that describe certain characteristics of the principals and their schools were created and used to sort the records and to match incomplete records to those with complete entries (donors).

For some items, such as item 5 (whether or not the principal also serves as a teacher in the school), data were copied directly from the donor to the record with the missing value. For other items, such as item 34 (number of hours spent per week on school-related activities), the entries on the donor record were factored with other questionnaire data to fill in the incomplete items. For example, if item 34 was unanswered, the donor's ratio of hours spent on school activities per week to hours spent interacting with students (item 35) was multiplied by the principal's reported hours spent interacting with students to calculate the answer that was imputed into item 34.

## 1. Public School and BIE-Funded School<sup>20</sup> Principals

BIE-funded school principal data were kept in the same data file as the public school principal data and received the same processing as a result. Non-BIE-funded school principals could be in a donor relationship with BIE-funded school principals. Private school principal data were kept on a separate data file and were processed as such during all stages of imputation.

The hot deck imputation was done within state; that is, the donor principal record had to be from the same state as the principal record with missing data. Within each state, the principal records were sorted by the following variables:

STATE	State in which the school is located
DEGREE	Highest degree attained
NLEVEL	Grade levels offered at school
EXPER	Years of experience as a principal and a teacher
YEARPRIN	Years served as a principal
HOWOLD	Principal's age

For item 42, the records were sorted by STATE / NLEVEL / EXPER. For items 1–5 and 11, the records were sorted by STATE / NLEVEL / DEGREE / YEARPRIN / HOWOLD. For items 6–10, 12–41, 43 the records were sorted by STATE / NLEVEL / DEGREE / YEARPRIN.

## 2. Private School Principals

The hot deck imputation was done within general religious affiliation (AFFILG, where 1 = Catholic, 2 = Other religious, 3 = Nonsectarian); that is, the donor principal record had to be for a principal at a school with the same general affiliation as the principal record with missing data. Within each general affiliation category, private school principals were sorted by the following variables:

STATE	State in which the school is located
DEGREE	Highest degree attained
NLEVEL	Grade levels offered
EXPER	Years of educational experience
YEARPRIN	Years served as a principal
HOWOLD	Principal's age
AFFILR	School's religious affiliation <sup>21</sup>

For item 39, the records were sorted by STATE / NLEVEL / EXPER. For items 1–5, 11, and 35, the records were sorted by NLEVEL / DEGREE / YEARPRIN / HOWOLD. For items 6–10, 12–34, 36–38, and 40 the records were sorted by NLEVEL / DEGREE / YEARPRIN / AFFILR.

Tables 55 through 57 include summaries of the amount of imputation performed in stage two processing.

<sup>20</sup> BIE-funded school refers to schools funded by the Bureau of Indian Education (BIE) that were not funded by a local school district. These schools may be operated by the BIE, a tribe, a private contractor, or other arrangement. BIE was formerly called the Bureau of Indian Affairs (BIA).

<sup>21</sup> AFFILR indicates the religion with which the private school was associated. A code of 26 was assigned when there was no religious affiliation associated with the school.

## Final File Imputation Tables for Principal Data

Following the stage two imputation processing, BIE-funded school principal records were removed from the public school principal data file and placed in a separate BIE school principal data file for the final data files. The private school principal data remained in the private school principal data file.

The number of source codes that were imputed on a given percentage of records during a given stage of processing appears below in tables 55 through 57. The first column, “Not imputed for any item,” includes items that are not eligible for imputation (e.g., “please specify” write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

**Table 55. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school principals, including public charter school principals: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	83	93	0	0
Ratio-adjustment method	161	15	0	0
Stage 2	8	168	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data. This table does not include the source codes corresponding to item 30, which was dropped from data processing due to poor data quality.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Principal Restricted Use Data File,” 2007–08.

**Table 56. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for private school principals: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	63	94	0	0
Ratio-adjustment method	142	15	0	0
Stage 2	12	144	0	1

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data. This table does not include the source codes corresponding to item 30, which was dropped from data processing due to poor data quality.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Principal Restricted Use Data File,” 2007–08.

**Table 57. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIE-funded school principals: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	125	49	2	0
Ratio-adjustment method	161	15	0	0
Stage 2	37	137	1	1

NOTE: NOTE: BIE refers to the Bureau of Indian Education. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data. This table does not include the source codes corresponding to item 30, which was dropped from data processing due to poor data quality.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE School Principal Restricted Use Data File,” 2007–08.

Appendix R contains the total number of imputations applied at each stage to each source code.

### **Imputation Procedures for the School Questionnaire (Form SASS-3A) and for School-Level Data From the Public School Questionnaire (With District Items) (Form SASS-3Y)**

School-level data were collected either on the School Questionnaire (SASS-3A) or the Public School Questionnaire (With District Items) (SASS-3Y). The SASS-3Y questionnaire was distributed to school district institutions with only one school and included items from the School Questionnaire and the School District Questionnaire in order to simultaneously collect information on the school district and the single school administered by that school district. In addition, all BIE-funded schools and public charter schools received the SASS-3Y. School-level data for traditional public, public charter, and BIE-funded schools were kept in the same public school data file for processing and received the same processing as a result.

Items on the School Questionnaire that were “not answered” went through a first stage of imputation in which unanswered items were imputed from (1) other items on the same school record, (2) items on the corresponding public school district record (for respondents that completed the SASS-3A), or (3) items from the Teacher Listing Form. After all stages of imputation were completed and there were no more “not answered” items remaining, the BIE-funded school data were split into a separate dataset, the BIE school data file. Traditional public and public charter school data remained on the same public school data file.

#### **First-Stage Imputation for Traditional Public, Public Charter, and BIE-Funded School Data**

In the first stage, unanswered items in the School Questionnaire were filled whenever possible by using information about the school from these sources:

- *Other Questionnaire Items on the School’s Record.* Based on entries from related items on the school record, assumptions were made about how the respondent might have answered items. For example, if the type of school was not reported in item 6, and item 35b indicated that 90 percent

or more of the school's students have an Individual Education Plan (IEP), then code 4, "Special Education," was imputed to item 6.

- *School District Questionnaire Record for the District that Operated the School.* If the school's district participated in SASS (for School Questionnaire respondents only), information from the district's questionnaire was used to complete some unanswered items on the school record. For example, if the number of migrant students was not reported in item 3, and the School District Questionnaire record indicated that there were no migrant students in the district, zero was imputed to item 3.
- *Teacher Listing Form (TLF) for the School.* If the counts of full-time and part-time teachers were not reported in item 28 of the School Questionnaire [item 33 on the Public School Questionnaire (With District Items)] and the school had completed a TLF, the counts of full-time and part-time teachers from the TLF were used to impute missing values in item 28.
- *School's Sample File Record, Including Data from the 2005–06 CCD.* In some cases CCD data from the school's sample file record were used to complete items. For example, if there was no response to item 41a of the School Questionnaire [item 57a on the Public School Questionnaire (with District Items)], whether or not the school has pre-K students, and the sample file indicated that there were pre-K students in the school, "Yes" was imputed to the item.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For example, if the sum of the students reported by the racial categories in item 5 was greater than the school's total enrollment reported in item 2, then the assumption was made that the proportions assigned to the categories were correct. Consequently, the counts in item 5 were adjusted to fit the total reported in item 2; that is, each entry in item 5 was multiplied by the ratio of the enrollment reported in item 2 to the sum of the entries in item 5.

Tables 58 and 59 include summaries of the amount of imputation performed in stage one processing.

## **Second-Stage Imputation for Traditional Public, Public Charter, and BIE-Funded School Data**

### **"Hot Deck" Imputation**

In the second stage of imputation, public and BIE school data items that remained unanswered were filled by using data from the record for a similar school (e.g., a school that offered the same grade levels, was the same type [e.g., regular, special program emphasis, special education, career/technical/vocational, alternative], etc.). Imputation variables that describe certain characteristics of the school (e.g., type of community where school is located, type of school, and school level) were created and used to sort the records and to match incomplete records to those with complete data (donor's records).

For some items, such as item 7, which asks whether the entire school was specifically for students who have been suspended or expelled, who have dropped out, or who have been referred for behavioral or adjustment problems, data were copied directly from the donor to the record with the missing value. For others, such as item 46, which asks for the number of Title I teachers [item 63 on the Public School Questionnaire (With District Items)], the entries on the donor record were used as factors along with other questionnaire data to fill the incomplete items. For example, if item 46 was unanswered, then the donor survey's ratio of number of Title I teachers to total number of teachers was multiplied by the reported total number of teachers to yield the number of Title I teachers that was imputed into item 48.

Public charter school data and BIE-funded school data were kept in the same data file as the traditional public school data throughout all stages of imputation. The second stage imputation was done within

state; that is, the donor record had to be for a school located in the same state as the school with the incomplete record. Within each state, the school records were sorted by the following variables:

STCNTY	Sample file code identifying the state and county location of the school
S0039	Total enrollment
TYPE	School type
LEVEL	Grade levels offered
MINEN	Minority enrollment
URB	Proximity to a metropolitan center

On the School Questionnaire, for items 1, 4, 9–17, 19–24, 26–28, 30a–f, 30h–k, 31, 33–34, and 41, the records were sorted by STATE / LEVEL / TYPE / STCNTY / S0039. For items 3, 5, 7–8, 18, 29, 30g, 31, 35–40, and 42–48, the records were sorted by STATE / LEVEL / MINEN / URB / STCNTY / S0039.

Table 58 includes a summary of the amount of imputation performed in stage two processing.

### **Final File Imputation Table for Public Schools**

Following stage two imputation, the data were split into two separate data files. The data from traditional public and public charter schools remained on the public school data file, while the data from BIE-funded schools were moved to a separate BIE school data file.

Below is a summary of the amount of imputation performed on both the School Questionnaire and the school items included on the Public School Questionnaire (With District Items). The number of source codes, including SASS-3Y items, that were imputed on a given percentage of records during a given stage of processing appear below in tables 58 and 59. The first column, “Not imputed for any item,” includes items that are not eligible for imputation (e.g., “please specify” write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

**Table 58. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public schools, including public charter schools: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	77	112	4	0
Ratio-adjustment method	179	14	0	0
Stage 2	27	165	1	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Restricted Use Data File,” 2007–08.

**Table 59. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIE-funded schools: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	159	75	3	0
Ratio-adjustment method	228	8	1	0
Stage 2	57	169	11	0

NOTE: NOTE: BIE refers to the Bureau of Indian Education. Every question item and data entry in the questionnaires has a corresponding source code. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE School Restricted Use Data File,” 2007–08.

Appendix R contains the total number of imputations applied at each stage to each source code.

## **Imputation Procedures for the Private School Questionnaire (Form SASS-3B)**

The 2007–08 school year was a survey year for both the SASS and the Private School Survey (PSS). The SASS Private School Questionnaire collected the same items that are present on the PSS, plus additional SASS school data, for the private schools included in the SASS sample.

Items 1–5a–e, 7, 9–10, 14–17, 19–22, 41–44, 70–71, and 73–78 (the PSS items within the Private School Questionnaire records) were processed with the PSS data files. Therefore, imputation for the Private School Questionnaire data were done in four stages: PSS stage one, SASS-3B stage one, PSS stage two, and SASS-3B stage two. Following each PSS processing step the relevant PSS data were copied onto the corresponding SASS-3B records.

### **First-Stage Imputation for Private Schools**

In the first stage of imputation, values for unanswered items were imputed whenever possible by using information about the school from these sources:

- *2007–08 Private School Survey Items.* If PSS items (items 1–5a–e, 7, 9–10, 14–17, 19–22, 41–44, 70–71, and 73–78) on the SASS Private School Questionnaire record were unanswered, data from the 2005–06 PSS were used to fill the unanswered items whenever possible. For example, if item 16, whether a school’s main role was to support homeschooling, was not reported in the SASS questionnaire and it had been reported on the 2005–06 PSS questionnaire, then the PSS entry was copied to item 16 of the Private School Questionnaire record.
- *Other Questionnaire Items on the School’s Private School Questionnaire Record.* Based on entries from related items on the school record, assumptions were made about how the respondent might have answered items with missing values. For example, if item 37 (whether the school grants high school diplomas) was unanswered and item 1 indicated the school had students enrolled in the 12th grade, then the assumption was made that the school offered high school diplomas and the code for “Yes” was imputed to item 37.

In addition to filling in items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation. For those where the number of teachers reported in item 45 (teachers by race) did not equal the number reported in item 44 (number of full-time and part-time teachers), the entries in item 45 were adjusted. For example, if the sum of the teachers reported by the racial categories in item 45 were greater than the total number of teachers reported in item 44, then the assumption was made that the proportions assigned to the categories in item 45 were correct. Consequently, the counts in item 45 were adjusted to fit the total reported in item 44; that is, each entry in item 45 was multiplied by the ratio of the teacher count reported in item 44 to the sum of the entries in item 45.

Table 60 includes a summary of the amount of imputation performed in stage one processing.

## **Second-Stage Imputation for Private Schools**

### ***“Hot Deck” Imputation***

In the second stage of imputation, unanswered items for the Private School Questionnaire were filled by using data from the records for similar schools (e.g., schools that offered the same grade levels, were the same type [e.g., regular, special program emphasis, special education, career/technical/vocational, alternative], had the same enrollment size, etc.). As noted previously, items 1–5a–e, 7, 9–10, 14–17, 19–22, 41–44, 70–71, and 73–78 were imputed during the PSS processing. Therefore, for these items, the imputed entries could have come from private schools not selected for SASS, as well as those that participated in SASS. For non-PSS items, entries were imputed by using data from other SASS private schools.

For some items, such as item 52 (whether or not the school requires limited-English-proficient students to pass a test of English language proficiency to complete its limited-English-proficient program), data were copied directly from the donor to the record with the missing value. For others, such as item 48 (number of short-term substitute teachers teaching any of grades K–12 on the most recent school day), the entries on the donor record were used as factors along with other questionnaire data to fill the incomplete items. For example, if item 48 was unanswered, then the donor survey’s ratio of the number of short-term substitute teachers to the total number of teachers was multiplied by the reported total number of teachers to yield the number of short-term substitute teachers that was imputed into item 48.

Imputation variables that describe certain characteristics of the schools (e.g., religious affiliation, size, and school level) were created and used to sort the records and to match incomplete records to those with complete data (donors). During the stage two imputations, school records were sorted so that records for similar schools were near each other on the data file. The following variables were used for sorting:

S0434	SASS Total enrollment
P305	PSS Total enrollment
TYPE	School type
LEVEL	Grade levels offered
MINEN	Percent of enrollment that is minority
URB	Proximity to a metropolitan center
AFFILR <sup>22</sup>	School’s religious affiliation (27 levels)

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<sup>22</sup> AFFILR indicates the specific religion orientation with which the private school was associated, if any. There are 27 different religious affiliation indicators.

AFFLG <sup>23</sup>	School's general affiliation (3 levels)
AFFILS <sup>24</sup>	School's religious and/or association affiliation

During the PSS second stage imputation, the PSS school records (those selected for SASS and those that were not) were sorted by AFFLG / LEVEL / AFFILS / TYPE / P305. For items that were not part of PSS, the records for SASS private schools for items 5f, 18, 23–36, 38–40, 46–47, 49–50, 59–60, and 63–67 were sorted by AFFLG / LEVEL / AFFILS / TYPE / AFFILR / URB / S0434. For items 6, 45, 48, 51–58, 61, and 68–69 the records were sorted by AFFLG / LEVEL / AFFILS / URB / MINEN / S0434.

Table 60 includes a summary of the amount of imputation performed in stage two processing.

### Final File Imputation Table for Private Schools

The number of source codes, including PSS items, that were imputed on a given percentage of records during a given stage of processing appear below in table 60. The first column, “Not imputed for any item,” includes items that are not eligible for imputation (e.g., “please specify” write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

**Table 60. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for private schools: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	124	186	3	5
Ratio-adjustment method	303	10	0	5
Stage 2	138	174	6	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Restricted Use Data File,” 2007–08.

Appendix R contains the total number of imputations applied at each stage to each source code.

### Imputation Procedures for the Teacher Questionnaires (Forms SASS-4A, -4B)

When entering the imputation step of data processing, teacher data for traditional public, public charter, and BIE-funded school teachers were kept together on one data file, and teacher data for private school teachers were on a separate data file. Items on the Teacher Questionnaires that still had items that were “not answered” went through a first stage of imputation in which unanswered items were imputed from other items on the same teacher record or items on the corresponding school record. The Teacher

<sup>23</sup> AFFLG indicates the school's general affiliation and is based on AFFILR. This indicates if the school was in one of the following three categories: Catholic, Other religious affiliation, or No religious affiliation.

<sup>24</sup> AFFILS indicates the school's religious affiliation and/or association using 13 categories. It provides more detailed categories for types of Catholic or nonsectarian schools and identifies whether the school's association falls under the Conservative Christian ideology.

Questionnaires then went through the second stage of imputation in which some of the remaining “not answered” items were filled using either the data record from a similar record or random ratio imputation. Finally, the Teacher Questionnaires went through a second step of second stage imputation in which all of the remaining “not answered” items were filled using either the mean or mode of groups of similar items.

After both stages of imputation were completed and there were no more “not answered” items remaining, the private school teacher data remained in a separate private school teacher data file. The teacher data from BIE-funded school teachers were placed in the BIE school teacher data file. Traditional public and public charter school teacher data remained in the same data file—the public school teacher data file.

## **First-Stage Imputation for Teachers**

Although the public and BIE-funded school teacher data and the private school teacher data were in two separate data files and were processed separately, they used the same imputation methodologies during the first stage of imputation. In the first stage, unanswered items for the Teacher Questionnaires were filled whenever possible by using information about the teacher from the following sources:

- *Other Questionnaire Items on the Teacher Questionnaire Record.* Based on entries from related items on the teacher record, assumptions were made about how the respondent might have answered items. For example, if item 4, which asks how much time the respondent works as a teacher at the school, was unanswered, and item 1 indicated that the teacher was a long-term substitute, and item 49 indicated that the teacher worked at least 35 hours per week, then “full-time” was imputed to item 4.
- *School Questionnaire Record for the School in Which the Teacher Taught.* If the teacher’s school participated in SASS, information from the record for the school was used to impute values in the first stage. For example, if item 13, which asks for the number of students taught that have an Individual Education Program (IEP), and the school record indicated there were no students with IEPs, then zero was imputed.

Tables 61 through 63 include a summary of the amount of imputation performed in stage one processing.

## **Second-Stage Imputation for Teachers**

### **“Hot Deck” Imputation**

In general, the “hot deck” imputation filled unanswered items by using data from the record for a similar teacher (e.g., a teacher teaching similar grade levels, etc.) who worked at a similar school (e.g., a school that was the same grade level, the same type, of similar size, etc.). Imputation variables that describe certain characteristics of the teachers and their schools were created and used to sort the records and to match incomplete records to those with complete entries (donors).

For some items, such as item 4 (how much time working as a teacher in the school), data were copied directly to the record with the missing value. For other items such as item 9 (year started teaching) the entries on the donor record were used as factors along with other questionnaire data to fill in the incomplete items. For example, if item 9 was unanswered, the teacher’s year of birth from item 71 and the donor’s age at the time they started teaching were used to impute an answer for item 9.

### 1. Public School Teachers

For stage 2, the states were combined into 23 groups according to their geographic location in order to increase the size of the data pool. All imputation was done within the state group; that is, the donor record had to be from a teacher within the same state group as the incomplete record. Within each state group, the records were sorted by the following variables:

STATE	State school location
S0039	School's total enrollment
SCHKND <sup>25</sup>	Kind of school
TEALEVEL	Grade levels taught

The records for all items were sorted by STATE / SCHKND / TEALEVEL / S0039.

### 2. Private School Teachers

The records were sorted by the following variables:

AFFILG	School's general affiliation
AFFILS	School's religious and/or association affiliation
TEALEVEL	Grade levels taught
URB	Proximity to a metropolitan center
S0434	School's total enrollment

The records were sorted by AFFLG / AFFILS / TEALEVEL / URB / S0434.

### 3. BIE-Funded School<sup>26</sup> Teachers

BIE-funded school teacher data were in the same dataset as the rest of the public school teacher data and received the same treatment. However, because SCHKND was one of the sorting variables, non-BIE-funded school teachers could not be in a donor relationship with BIE-funded school teachers.

### 4. Public Charter School Teachers

Charter school teacher data were in the same dataset as the rest of the public school teacher data and received the same treatment. However, because SCHKND was one of the sorting variables, non-charter school teachers could not be in a donor relationship with public charter school teachers.

### **Mean and Mode Imputation**

During mean and mode imputation, responses were imputed by establishing groups of similar respondents (donor groups) and then imputing for a particular item by substituting the missing response to a particular item with either the mean or mode of the same data item within that established donor group. Donor

<sup>25</sup> SCHKND indicates whether the school is a traditional public school (including Department of Defense and some one-school districts), BIE-funded school, or public charter school.

<sup>26</sup> BIE-funded school refers to schools funded by the Bureau of Indian Education (BIE) that were not funded by a local school district. These schools may be operated by the BIE, a tribe, a private contractor, or other arrangement. BIE was formerly called the Bureau of Indian Affairs (BIA).

groups were selected based on teachers' data for specified items called "matching variables." If several teachers answered the selected matching variables in the same manner, then it was assumed that imputation of one data item from the mean or mode of the cases within the similar group was reasonable.

There was one matching variable used to establish donor groups for mean and mode imputation. This item was STGROUP, which categorized states into 23 groups according to their geographic location and school system similarities. The imputation program searched for the group of records within the same state group, and once this donor group was established, the mean or mode of the data for a particular item was copied to the record with the unanswered item.

The mode of responses within a donor group was used for the categorical items. For example, if a teacher left item 7d, whether the respondent was teaching in addition to having a main occupational activity outside the field of education during the last school year, unanswered, then a donor group was found using the matching variable STGROUP. Once the donor group was established, the modal response (the response that occurs most frequently) to this item for this group was imputed to the unanswered item.

The mean of responses within a donor group was used for continuous items. For example, if a teacher left item 48 (how many hours the teacher spends on all teaching and school-related activities each week) unanswered, then a donor group was found using the matching variable STGROUP. Once the donor group was established, the mean response (the average of all the responses for that item within the donor group) to this item within this group was imputed to the unanswered item.

### **Final File Imputation Tables for Teacher Data**

Following the final stage of imputation, BIE-funded school teacher records were removed from the public school teacher data to create two final data files—the BIE school teacher data file and the public school teacher data file. Public charter school teachers remained in the same file as public school teachers. Private school teachers remained in a separate data file—the private school teacher data file. The number of source codes that were imputed on a given percentage of records during a given stage of processing appears for each file below in tables 61 through 63. The first column, "Not imputed for any item," includes items that are not eligible for imputation (e.g., "please specify" write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

**Table 61. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school teachers, including public charter school teachers: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	259	121	0	0
Ratio-adjustment method	380	0	0	0
Stage 2	110	270	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Teacher Restricted Use Data File," 2007–08.

**Table 62. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for private school teachers: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	290	118	0	0
Ratio-adjustment method	408	0	0	0
Stage 2	117	289	2	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Private School Teacher Restricted Use Data File,” 2007–08.

**Table 63. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIE-funded school teachers: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	292	88	0	0
Ratio-adjustment method	379	1	0	0
Stage 2	147	230	3	0

NOTE: BIE refers to the Bureau of Indian Education. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE School Teacher Restricted Use Data File,” 2007–08.

Appendix R contains the total number of imputations applied at each stage to each source code.

### **Imputation Procedures for the School Library Media Center Questionnaire (Form LS-1A)**

School library media center data for public and BIE-funded schools were on the same data file when entering the imputation step of data processing. Items from the School Library Media Center Questionnaire that were “not answered” went through a first stage of imputation in which unanswered items were imputed from other items on the same school library media center record or items on the corresponding school record. The school library media center data then went through the second stage of imputation in which all of the remaining “not answered” items were filled using the data record from a similar record. After both stages of imputation were completed and there were no more “not answered” items remaining, the school library media center data from BIE-funded schools were moved into a separate data file—the BIE school library media center data file. Data from traditional public and public charter school libraries remained together on the public school library media center data file.

## First-Stage Imputation for School Library Media Centers

In the first stage, unanswered items were completed whenever possible by using information about the school library from the following sources:

- *Other Questionnaire Items on the Library Record.* Based on entries from related items on the library record, some assumptions were made about how the respondent might have answered items. For example, if item 21 on the School Library Media Center Questionnaire (whether the school staff member with primary responsibility for the library media center is itinerant) was unanswered and items 13–15 indicated that there was no paid staff in the library media center, then code 3 for “There is no school staff member who has primary responsibility for the library media center” was imputed to item 21.
- *Matching SASS School Questionnaire.* For a few unanswered items, data from the matching school record were used to impute the entries. For example, if item 13 on the School Library Media Center Questionnaire (did this library media center have any paid state-certified library media specialists) was unanswered and entries on the school record indicated that the school did not have any librarians, then the code for “No” was imputed to item 13 of the library record.

Tables 64 and 65 include a summary of the amount of imputation performed in stage one processing.

## Second-Stage Imputation for School Library Media Centers

### ***“Hot Deck” Imputation***

In general, the second stage of imputation filled unanswered items by using data from the record of a library in a similar school (e.g., a school that offered the same grade levels, had a similar enrollment size, was located in same type of community, etc.). Imputation variables that described certain characteristics of the schools (e.g., enrollment size and school level) were copied from the matching school record. In addition, a variable that categorized the size of the library was created by using the number of books held at the end of the 2006–07 school year. These school variables and the library variable were used to sort the library records and to match incomplete records to those with complete entries (donors).

For some items, such as School Library Media Center Questionnaire item 4 (whether library was used as a classroom due to a classroom shortage in the most recent full week of school), data were directly copied to the record with the missing value. For others, however, such as item 32a(2) (number of books acquired during the 2006–07 school year), entries on the donor record were used as factors along with other information on the incomplete record to fill the unanswered items. For example, if the number of books held was reported for Library A, but the number acquired was not, then the number acquired by Library A was imputed using the donor’s ratio of books acquired to books held as applied to the number of books held by Library A ( $\text{Library A books acquired} = \text{Library A books held} * (\text{donor library books acquired} / \text{donor library books held})$ ).

#### 1. Public School Library Media Centers

The School Library Media Center Questionnaire records were sorted so that records for libraries of similar schools were near each other on the file. The data were sorted by the following variables:

STATE	State location of school
ENR	School’s total enrollment

LEVEL	Grade levels offered at school
URB	Proximity to a metropolitan center
M0106	Total number of books in library in 2006–07

The records for all of the items on the School Library Media Center Questionnaire were sorted by ENR / LEVEL / URB / M0106.

## 2. BIE-funded School<sup>27</sup> Library Media Centers

BIE-funded school library media centers were not treated separately from public school library media centers.

## 3. Charter School Library Media Centers

Public charter school library media centers were not treated separately from traditional public school library media centers.

## Final File Imputation Tables for School Library Media Centers

Following the final stage of imputation, BIE-funded school library records were removed to create a separate data file (BIE school library media center data file), while the public charter school library records remained with the public school library data file (public school library media center data file). The number of source codes that were imputed on a given percentage of records during a given stage of processing appears for each file below in tables 64 and 65. The first column, “Not imputed for any item,” includes items that are not eligible for imputation (e.g., “please specify” write-in items, respondent information not included on the final data files, time to complete survey) as well as items that required no imputation at one or both of the stages.

**Table 64. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for public school libraries, including public charter school libraries: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	25	37	0	0
Ratio-adjustment method	64	0	0	0
Stage 2	4	58	0	0

NOTE: Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Library Media Center Restricted Use Data File,” 2007–08.

<sup>27</sup> BIE-funded school refers to schools funded by the Bureau of Indian Education (BIE) that were not funded by a local school district. These schools may be operated by the BIE, a tribe, a private contractor, or other arrangement. BIE was formerly called the Bureau of Indian Affairs (BIA).

**Table 65. Number of source codes imputed, by percentage of records receiving imputation and imputation stage for BIE-funded school libraries: 2007–08**

Imputation stage	Not imputed for any record	Imputed for 1–15 percent of the records	Imputed for 16–30 percent of the records	Imputed for more than 30 percent of the records
Stage 1	42	20	0	0
Ratio-adjustment method	62	0	0	0
Stage 2	34	28	0	0

NOTE: NOTE: BIE refers to the Bureau of Indian Education. Every question item and data entry in the questionnaires has a corresponding source code. The source codes are the 4-digit numbers found to the left of each item or data entry field in the questionnaires, which become the variable names for these data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “BIE School Library Media Center Restricted Use Data File,” 2007–08.

Appendix R contains the total number of imputations applied at each stage to each source code.

## Chapter 9. Weighting and Variance Estimation

This chapter describes the weighting procedure used for 2007–08 Schools and Staffing Survey (SASS). The final weights are needed to have the sample estimates reflect the target survey population when analyzing the data. In addition, the variance estimation procedures are discussed, which include the methods of estimating sampling errors for weighted estimates in SASS using the replicate weights.

### Weighting

This section describes the weighting processes for each SASS respondent. The general purpose of weighting is to scale up the sample estimates to represent the target survey population. The steps for weighting various types of respondents are largely the same. The initial basic weight (the inverse of the sampled unit's probability of selection at the time of initial selection) is used as the starting point, then a sampling adjustment factor is applied to account for any additional circumstances impacting the probability of selection (e.g., merged schools or split schools), which produces the base weight. Next, a nonresponse adjustment factor is calculated and applied using information known about the respondents and nonrespondents from the sampling frame data. Finally, various ratio-adjustment factors are calculated and applied to the sample. The type and number of ratio-adjustment factors varies with each SASS data file. However, in general, each adjusts the sample totals to frame totals in order to reduce sampling variability.

Most components of the weighting process employ weighting classes in the calculation of the weighting adjustments factors. Weighting classes allow for differential adjustment factors to be computed for the same weighting component. This technique is especially useful when the computed factors are presumed to differ substantially, such as when patterns of nonresponse vary across subpopulations. In subsequent sections, the formula for computing the particular weighting component is presented for each component of SASS, along with a brief description of each component of the weight. When computations were done within weighting classes, or cells, such as nonresponse adjustments, the cells are described. Sometimes a cell did not have enough data to produce a reliable estimate, and was collapsed according to specified criteria. The most important variables were always collapsed last. The collapsing criteria are also described below for each component of SASS.

The school weight is described first since schools are the primary sampling unit. The public, Bureau of Indian Education (BIE), and private school weights have similar structures and are presented together. They differ only by the definition of the cells that are used to compute the nonresponse adjustment factor and the ratio-adjustment factor(s). The specific weighting adjustment factors and cells are described in the second section. Since the public, BIE-funded, and private school administrator weights are similar to the school weights, they are described third. In the fourth section, the public school district weights are described. The fifth section describes how district initial basic weights are computed. Teacher weights are described in the sixth section. Since the public, BIE-funded, and private school teacher weights have the same structure, they are presented together. They differ only in the definition of the cells that are used to compute the various weighting factors. These cells are described separately within the teacher weight section. The final section describes the school library weights. The School Library Media Center Questionnaire was only offered to public and BIE-funded schools in this administration of SASS.

The distribution of the final weights from each file is provided in table 66 below.

**Table 66. Distribution of final weights for interviewed cases, by data file: 2007–08**

Data file	Minim- um	Weight at given percentile									Maxi- mum	Mean
		1 <sup>st</sup>	5 <sup>th</sup>	10 <sup>th</sup>	25 <sup>th</sup>	50 <sup>th</sup>	75 <sup>th</sup>	90 <sup>th</sup>	95 <sup>th</sup>	99 <sup>th</sup>		
Public School District	0.79	0.98	1.00	1.00	1.26	1.97	3.90	7.36	11.06	22.41	113.52	3.54
Public School	0.78	1.07	1.59	2.09	3.48	7.14	14.89	28.55	38.68	65.44	155.93	11.99
BIE School	1.13	1.13	1.13	1.13	1.29	1.31	1.32	1.53	1.53	2.65	4.60	1.35
Private School	1.00	2.87	4.09	4.88	6.66	9.08	12.12	16.63	20.21	33.81	63.02	10.19
Public School Principal	0.83	1.09	1.63	2.15	3.54	7.20	15.34	28.93	39.52	66.16	165.30	12.13
BIE School Principal	1.13	1.13	1.13	1.13	1.23	1.25	1.31	1.77	1.77	2.45	2.61	1.32
Private School Principal	1.00	3.52	5.38	6.78	9.15	12.57	17.21	24.70	31.43	52.12	120.77	14.79
Public School Teacher	2.22	6.36	9.31	12.03	20.39	44.51	101.93	215.37	328.56	640.08	1,937.31	89.03
BIE School Teacher	1.45	1.81	2.88	3.98	5.42	6.97	9.48	13.24	14.37	25.31	28.60	7.84
Private School Teacher	1.04	9.55	17.29	28.31	45.74	66.72	97.31	153.01	194.51	296.22	980.87	81.60
Public School Library Media Center	0.76	1.06	1.51	1.99	3.29	6.71	13.96	26.99	36.91	61.04	147.96	11.26
BIE School Library Media Center	1.10	1.10	1.10	1.10	1.14	1.26	1.34	1.70	1.70	2.28	3.42	1.31

NOTE: BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, BIE School, Private School, Public School Principal, BIE School principal, Private School Principal, Public School Teacher, BIE School Teacher, Private School Teacher, Public School Library Media Center, and BIE School Library Media Center Data Files,” 2007–08.

### **School Weight for the School, Private School, and Public School (With District Items) Questionnaires**

The final weight for the public and private school data is the product of

(Initial Basic Weight) and (Sampling Adjustment Factor) and (Nonresponse Adjustment Factor) and (First-Stage Ratio-Adjustment Factor) and (Second-Stage Ratio-Adjustment Factor)<sup>28</sup>

where:

*Initial Basic Weight* is the inverse of the probability of selection of the school at the time of selection.

<sup>28</sup> The second-stage ratio-adjustment factor applies to private schools only.

*Sampling Adjustment Factor* is an adjustment that accounts for circumstances that affect the school's probability of selection that are identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (i.e., a junior high school and a senior high school merge to become a junior/senior high school). Any changes in the school collapsing described in chapter 4 (i.e., uncollapsing or additional collapsing of schools) are adjusted for in this step. The collapsing described in chapter 4 is reflected in the initial basic weight. The base weight used to evaluate response rates and the unit and item bias analysis is produced by multiplying the sampling adjustment factor with the initial basic weight.

*Nonresponse Adjustment Factor* is an adjustment that accounts for total school nonresponse. It is the weighted (product of initial basic weight and sampling adjustment factor) ratio of the total eligible in-scope schools (interviewed schools plus non-interviewed schools) to the total responding in-scope schools (interviewed schools) within cells. Variables used to define cells are presented in exhibit 8. At this stage of the weighting process, non-interviewed and out-of-scope schools are assigned a weight of zero.

*First-Stage Ratio-Adjustment Factor* is a factor that adjusts the sample estimates to known final frame totals after all frame construction. Construction of the frame is described in chapter 4. For public schools, the first-stage ratio-adjustment factor is equal to the ratio of the total number of SASS frame noncertainty schools (i.e., schools not selected with certainty as described in chapter 4) to the weighted sample estimate of the total number of noncertainty schools within each weighting class, or cell, defined for this step in the weighting procedure. Certainty schools were excluded from both the numerator and denominators and were assigned a factor equal to one. Since all BIE-funded schools were selected with certainty, this step in the weighting was not applied to them. All BIE-funded schools received a factor of one. For private schools, the adjustment was the same, except for the area frame. For the area frame, all private schools in noncertainty primary sampling units (PSUs) were in sample and there were no universe counts for all noncertainty PSUs. These schools were assigned a factor equal to one. Certainty private schools were also excluded from this calculation and received a factor set equal to one.

*Second-Stage Ratio-Adjustment Factor* applies only to private schools. It is a factor that adjusts sample estimates based on an older sampling frame to current independent control counts. For the 2007–08 SASS, the list frame for private schools was the current 2007–08 PSS list frame, whereas the area frame was based on an older 2005–06 PSS area frame sample. The second-stage ratio-adjustment factor is the ratio of the weighted 2007–08 PSS estimates of schools to the weighted 2007–08 SASS sample estimate of schools within each cell.

## School Weighting Adjustment Cells and Adjustment Factors Research

The school nonresponse adjustment factor and first- and second-stage ratio-adjustments were computed within cells. The schools were classified into cells based on sampling frame data for the non-interview and first-stage ratio-adjustments. For the second-stage ratio-adjustment, private schools were classified into cells using questionnaire data.

The cell definitions for schools in the 2007–08 SASS were derived from the 2003–04 SASS cell definitions, with four potential modifications based on research using data on the 2003–04 and 2007–08 administrations of SASS. First, the 2003–04 SASS final benchmark tables were examined. The purpose was to identify any substantial differences between the 2003–04 SASS estimates and the sampling frame that could not be explained easily due to deviations in definition or scope. If substantial differences were found, then the enrollment categories and collapsing order were examined to determine if changes to them would result in having the weighting reduce the differences.

Second, the 2003–04 SASS unit bias analysis results were reviewed to determine how noteworthy differences in the distribution of respondents in SASS compared to the sampling frame could be reduced with the non-interview adjustment. These noteworthy differences are indicators of potential nonresponse bias. This was done based on the assumption that response patterns would be relatively constant over time. As discussed in chapter 6, this assumption was not always accurate.

The third modification occurred when the locale code used in the previous SASS was replaced. The 2003–04 SASS weighting procedure incorporated an eight-level metro-based locale code, while the 2007–08 SASS weighting uses the new twelve-level place-based locale.

The fourth and final step was to simulate the 2007–08 SASS weighting to determine the impact the weighting procedure would have on the 2007–08 SASS estimates, particularly the impact on the benchmark tables. The benchmark tables compare various SASS estimates to the sampling frame based on the Common Core of Data (CCD) and the Private School Survey (PSS). The enrollment categories, collapsing order, and collapsing criteria (the minimum number of interviews per cell and the minimum and maximum constraints on the calculated factors) were modified until the simulated SASS estimates were within 1 percent of the total number of schools and 5 percent of the student enrollment for each state or affiliation strata as reported on the sampling frame.

While the steps outlined above applied to all schools, public schools that were sampled with certainty were adjusted within a separate table for the nonresponse adjustment as shown in exhibit 8. First-stage and second-stage ratio adjustment factors were not applicable to certainty public schools. The use of a separate table was done because of changes in the variance methodology, which now reflects a variance associated with nonresponding certainty schools. See the Variance Estimation section later in this chapter for further details on the variance methodology.

### ***Public, Public Charter, BIE, and Private School Adjustment Cells***

Exhibit 8 presents a summary of the collapsing criteria applied for each adjustment factor to the different types of schools in the weighting process. The exact cells are shown in appendix S. Career Technical Centers (CTCs) are omitted from this table. Due to the small sample size, all CTC schools are placed in the same weighting cell.

**Exhibit 8. Adjustment factors and collapsing criteria for school weights: 2007–08**

Type of school	Nonresponse adjustment factor			First-stage ratio adjustment factor			Second-stage ratio adjustment factor (list and area frames)			
	Collapsing criteria		Collapsing order	Collapsing criteria		Collapsing order	Collapsing criteria	Collapsing order		
<b>Public schools</b>										
Certainty	Factor	≤ 2.0	Enrollment, grade level, state/region	†			†	†	†	
	Interviews	≥ 5								
	Non-interviews	≥ 1								
BIE-funded <sup>1</sup>	Factor	≤ 2.0	Enrollment, grade level, state	†			†	†	†	
	Interviews	≥ 10								
	Non-interviews	≥ 1								
High American Indian enrollment	Factor	≤ 2.0	Enrollment, grade level, state/region	Factor	≥ 0.667 and ≤ 1.5	Enrollment, grade level, state/region	Grade level, state/region	Grade level, state/region	Grade level, state/region	
	Interviews	≥ 10		Interviews	≥ 10					
Public charter	Factor	≤ 2.0	Grade level, state/region	Factor	≥ 0.667 and ≤ 1.5	Grade level, state/region	Grade level, state/region	Grade level, state/region	Grade level, state/region	
	Interviews	≥ 10		Interviews	≥ 10					
Other public	Factor	≤ 1.5	Collapsed locale, enrollment, grade level	Factor	≥ 0.667 and ≤ 1.5	Enrollment, collapsed locale, grade level	Factor	≥ 0.667 and ≤ 1.5	Enrollment, collapsed locale, grade level	
	Interviews	≥ 10		Interviews	≥ 10					
<b>Private schools</b>										
List Frame	Factor	≤ 2.0	Enrollment, region or collapsed locale (depending upon affiliation), grade level	Factor	≥ 0.667 and ≤ 1.5	Grade level, affiliation	Factor	≥ 0.667 and ≤ 1.5	Enrollment, collapsed locale, grade level	
	Interviews	≥ 15		Interviews	≥ 15					
Area Frame	Factor	≤ 2.0	Enrollment, grade level, collapsed affiliation	†			Interviews	≥ 15	Enrollment, collapsed locale, grade level	
	Interviews	≥ 15								

† Not applicable.

<sup>1</sup> BIE school refers to schools funded by the Bureau of Indian Education (BIE) that are operated by BIE, a tribe, or a private contractor and not by a regular school district.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2007–08.

This exhibit is used to identify the differences in the criteria used in each adjustment factor calculation. The collapsing criteria are used within a cell, while the collapsing order is used to determine a homogenous cell with which to collapse. The categories used in the collapsing order differed by sector, type of public school, state or affiliation stratum and are detailed in appendix S. Note that collapsing for public schools was restricted to within type (certainty, BIE-funded, high proportion of American Indian enrollment, public charter, other public). For example, if a particular cell in the certainty public school table met the collapsing criteria (i.e., had at least five interviewed schools, at least one non-interviewed school, and an initial factor of less than two), then it was not collapsed into another cell. However, if that

cell did not meet any one of the above criteria, it was collapsed with a similar cell. In this case, the cell would have been collapsed into a cell with a similar enrollment. The number of non-interviewed schools was only used in certainty school cells to determine if the cell needed to be collapsed. In the certainty public school example above, the number of interviewed schools was insufficient to prevent collapsing of the nonresponse adjustment factor cells even though the number of non-interviewed schools was sufficient. The number of interviews needed to keep the cell from collapsing was always used as a criterion for collapsing and can differ for different types of schools.

## **Principal Weight for the Principal and Private School Principal Questionnaires**

The public, public charter, BIE-funded, and private school principal weighting was done the same way as the school questionnaire weighting described above. Since the response status for each of the principal surveys and the corresponding school surveys could be different, the weighting process was done separately for each questionnaire. The sum of the principal weights may be less than the sum of the school weights because some schools do not have principals. See chapter 7 for a discussion of school and principal interview status.

## **Public School District Weight for the School District Questionnaire**

The final weight for the public school district data is the product of

(Initial Basic Weight) and (Sampling Adjustment Factor) and (Nonresponse Adjustment Factor) and (First-Stage Ratio-Adjustment Factor)

where:

*Initial Basic Weight* is the inverse of the probability of selection of the district at the time of selection. Note that districts were not selected directly, making the computation of this probability more complex. See the next section, District Initial Basic Weights, for a detailed description of the computation.

*Sampling Adjustment Factor* is an adjustment that accounts for circumstances that affect the district's probability of selection that are identified after the data collection has begun, such as a merger or split. For example, if two districts consolidated into one, the consolidated district's base weight would reflect the two chances of selection (i.e., the joint probability of selection). The base weight used to evaluate response rates and the unit and item bias analysis is produced by multiplying the sampling adjustment factor with the initial basic weight.

*Nonresponse Adjustment Factor* is an adjustment that accounts for total district nonresponse. It is the weighted (product of the initial basic weight and sampling adjustment factor) ratio of total eligible in-scope districts to the total responding in-scope districts, computed within weighting classes, or cells, (see exhibit 9) within each state. At this stage of the weighting, out-of-scope and non-interviewed districts are assigned a weight of zero. Since Hawaii consists of only one district in the state, no amount of collapsing would satisfy the collapsing criteria. Therefore, a separate nonresponse adjustment factor was computed for Hawaii.

*First-Stage Ratio-Adjustment Factor* is a factor that adjusts the sample estimates to the 2005–06 CCD total number of districts with schools. It is the ratio of the total number of noncertainty districts in the frame to the weighted sample estimate of the total number of noncertainty districts in the frame, computed within weighting classes, or cells, (see exhibit 9) within each state. Certainty districts were assigned a factor of one.

**Exhibit 9. Adjustment factors and collapsing criteria as applied to public school district weights: 2007–08**

Type of public school district	Nonresponse adjustment factor		First-stage ratio adjustment factor	
	Collapsing criteria	Collapsing order	Collapsing criteria	Collapsing order
Certainty districts	Factor	≤ 1.5	†	
	Interviews	≥ 10		
Remaining districts	Factor	≤ 1.5	Factor	≥ .667 and ≤ 1.5
	Interviews	≥ 10	Interviews	≥ 10

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2007–08.

This exhibit is used to identify the differences in the criteria used in each adjustment factor calculation. Some of the criteria (collapsing criteria) apply within a cell, while the other criteria (collapsing order) are used to determine a similar cell with which to collapse. Criteria vary by whether or not the district was selected with certainty.

## District Initial Basic Weights

Given the complexity of the sampling scheme, the calculation of the district initial basic weights is not straightforward. Districts were divided into two groups: (1) districts outside Delaware, Florida, Maryland, Nevada, and West Virginia, and (2) districts in Delaware, Florida, Maryland, Nevada, and West Virginia, which are all certainty districts. See chapter 4 for a discussion of district sample selection.

### ***District Initial Basic Weights for Districts Outside Delaware, Florida, Maryland, Nevada, and West Virginia***

The district sample was not selected directly through a district frame. Instead, the districts were selected through the school sampling. In other words, the districts associated with the sampled schools comprised the district sample. The initial basic weight, therefore, is more complex than for other respondents.

Since schools were stratified by grade level (i.e., elementary, secondary, and combined) and by type (i.e., high proportion of American Indian enrollment, public charter, other public) the probability of selection for district k, ( $P_k(\text{sel})$ ) can be written as follows:

$$P_k(\text{sel}) = 1 - [(1 - P_k(\text{HAI}, \text{ELM}))(1 - P_k(\text{HAI}, \text{SEC}))(1 - P_k(\text{HAI}, \text{COM})) \\ (1 - P_k(\text{PUB}, \text{ELM}))(1 - P_k(\text{PUB}, \text{SEC}))(1 - P_k(\text{PUB}, \text{COM})) \\ (1 - P_k(\text{CHA}, \text{ELM}))(1 - P_k(\text{CHA}, \text{SEC}))(1 - P_k(\text{CHA}, \text{COM}))]$$

where:  $P_k(\text{HAI}, \text{ELM})$  is the probability of selecting district k which contains schools that are classified as elementary (ELM) and have a high American Indian enrollment (HAI). This equals the sum of the school selection probabilities for the schools that are American Indian, elementary, and in district k. If the sum is greater than one, then  $P_k(\text{HAI}, \text{ELM})$  is set equal to one.

$P_k(\text{HAI}, \text{SEC})$  is the probability of selecting district k which contains schools that are classified as secondary (SEC) and have a high American Indian enrollment (HAI). This

equals the sum of the school selection probabilities for the schools that are American Indian, secondary, and in district k. If the sum is greater than one, then  $P_k(HAI,SEC)$  is set equal to one.

$P_k(HAI,COM)$  is the probability of selecting district k which contains schools that are classified as combined (COM) and have a high American Indian enrollment (HAI). This equals the sum of the school selection probabilities for the schools that are American Indian, combined, and in district k. If the sum is greater than one,  $P_k(HAI,COM)$  is set equal to one.

$P_k(PUB,ELM)$  is the probability of selecting district k which contains schools that are elementary (ELM) and are not public charter schools or do not have high American Indian enrollment (PUB). This equals the sum of the school selection probabilities for the schools that are not American Indian or public charter, but are elementary and in district k. If the sum is greater than one, then  $P_k(PUB,ELM)$  is set equal to one.

$P_k(PUB,SEC)$  is the probability of selecting district k which contains schools that are secondary (SEC) and do not have a high American Indian enrollment or are not public charter schools (PUB). This equals the sum of the school selection probabilities for the schools that are not American Indian, not public charter, and are secondary and in district k. If the sum is greater than one, then  $P_k(PUB,SEC)$  is set equal to one.

$P_k(PUB,COM)$  is the probability of selecting district k which contains schools that are combined (COM) and not American Indian or public charter (PUB). This equals the sum of the school selection probabilities for the schools that are not American Indian or public charter, are combined and in district k. If the sum is greater than one, then  $P_k(PUB,COM)$  is set equal to one.

$P_k(CHA,ELM)$  is the probability of selecting district k which contains schools that are elementary (ELM) and public charter (CHA). This equals the sum of the school selection probabilities for the schools that are public charter, elementary, and in district k. If the sum is greater than one, then  $P_k(CHA,ELM)$  is set equal to one.

$P_k(CHA,SEC)$  is the probability of selecting district k which contains schools that are classified as secondary (SEC) and public charter (CHA). This equals the sum of the school selection probabilities for the schools that are public charter, secondary, and in district k. If the sum is greater than one, then  $P_k(CHA,SEC)$  is set equal to one.

$P_k(CHA,COM)$  is the probability of selecting district k which contains schools that are classified as combined (COM) and public charter (CHA). This equals the sum of the school selection probabilities for the schools that are public charter, combined, and in district k. If the sum is greater than one,  $P_k(CHA,COM)$  is set equal to one.

Note that  $1/P_k(sel)$  equals the initial basic weight.

### **District Initial Basic Weights for Delaware, Florida, Maryland, Nevada, and West Virginia**

The initial basic weight was one for all regular districts in Delaware, Florida, Maryland, Nevada, and West Virginia since all districts in these five states were guaranteed to be selected for sample. Their final weights, however, may not equal one due to adjustment for nonresponse.

### **Teacher Weights for the Teacher and Private School Teacher Questionnaires**

The final weight for public and private school teachers is the product of

(Initial Basic Weight) and (School Sampling Adjustment Factor) and (Teacher List Nonresponse Adjustment Factor) and (Teacher-Within-School Nonresponse Adjustment Factor) and (First-Stage Ratio-Adjustment Factor) and (Teacher Adjustment Factor)

where:

*Initial Basic Weight* is the inverse of the probability of selection of the teacher at the time of selection.

*Sampling Adjustment Factor* is an adjustment that accounts for circumstances that affect the school's probability of selection that are identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (i.e., a junior high school and a senior high school merge to become a junior/senior high school). Any changes in the school collapsing described in chapter 4 (i.e., uncollapsing or additional collapsing) are adjusted for in this step. The collapsing described in chapter 4 is reflected in the initial basic weight. The base weight used to evaluate response rates and the unit and item bias analysis is produced by multiplying the sampling adjustment factor with the initial basic weight.

*Teacher List Nonresponse Adjustment Factor* is an adjustment that accounts for teachers in schools that did not provide a list of its teachers. It is the weighted (the product of the school initial basic weight and the school sampling adjustment factor) ratio of total eligible in-scope schools to the total in-scope schools providing teacher lists, computed within cells (see exhibit 10).

*Teacher-within-school Nonresponse Adjustment Factor* is an adjustment that accounts for sampled teachers who did not respond to the survey. It is the weighted (product of all previously defined components) ratio of the total eligible teachers to the total eligible responding teachers computed within cells (see exhibit 10). At this stage of the weighting procedure, non-interviewed and out-of-scope teachers are assigned a weight of zero.

*First-Stage Ratio-Adjustment Factor* is a factor computed at the school level that adjusts the sampled schools' frame estimates of full-time equivalent (FTE) teachers to the total full-time equivalent teachers in the whole school sampling frame (either the 2005–06 CCD or the updated 2005–06 PSS). For the set of noncertainty schools, the factor is the ratio of the frame estimate of the total number of FTE teachers to the weighted (product of all previously defined components) sample estimate of the total number of FTE teachers. These factors are computed within cells (see exhibit 10). The sample estimate uses the frame count of the number of FTE teachers in the school.

For teachers from certainty schools, the factor is one.

*Teacher Adjustment Factor* is a factor that adjusts the inconsistency between the estimated number of teachers from the SASS school data files and the SASS teacher data files. It is the ratio of the weighted number of teachers from the school data file for a cell to the weighted number of teachers on the teacher data file for a cell. The weight is the product of all previously defined components. This factor ensures that teacher estimates from the teacher file will agree with the corresponding teacher aggregates from the school file (after imputation), since the teacher file counts are being adjusted to agree with the school counts.

The teacher list nonresponse adjustments, the teacher-within-school nonresponse adjustments, the first-stage ratio adjustments, and the teacher adjustments are computed within cells. The cells for the teacher list nonresponse adjustments and the first-stage ratio adjustments are the same as those used in the school nonresponse and first-stage adjustments, and are described in the school weight section above. However, exhibit 10 describes the criteria for the teacher-within-school nonresponse adjustment and teacher adjustments.

**Exhibit 10. Adjustment factors and collapsing criteria as applied to teacher weights: 2007–08**

Type of teacher	Teacher-within-school nonresponse adjustment factor			Teacher adjustment factor <sup>1</sup>		
	Collapsing criteria	Collapsing order	Collapsing criteria	Collapsing order	Collapsing criteria	Collapsing order
<b>Public school teachers</b>						
BIE-funded <sup>2</sup>	Factor	≤ 1.5	Enrollment, experience, subject, region	Factor	≥ 0.667 and ≤ 1.5	Ethnicity/race, grade level
	Interviews	≥ 15		Interviews	≥ 15	
High American Indian enrollment	Factor	≤ 1.5	Enrollment, experience, subject, region	Factor	≥ 0.667 and ≤ 1.5	Enrollment, state or region, ethnicity/race
	Interviews	≥ 15		Interviews	≥ 15	
Public charter	Factor	≤ 1.5	Enrollment, experience, subject, region	Factor	≥ 0.667 and ≤ 1.5	Grade, ethnicity/race, state or region
	Interviews	≥ 15		Interviews	≥ 15	
Career Technical Centers	Factor	≤ 1.5	Experience, region, subject	Factor	≥ 0.667 and ≤ 1.5	Ethnicity/race
	Interviews	≥ 15		Interviews	≥ 15	
Other public	Factor	≤ 1.5	Enrollment, subject, experience, collapsed locale	Factor	≥ 0.667 and ≤ 1.5	Enrollment, ethnicity/race, grade, state
	Interviews	≥ 15		Interviews	≥ 15	
<b>Private school teachers</b>						
List frame	Factor	≤ 1.5	Enrollment, region, subject, affiliation	Factor	≥ 0.667 and ≤ 1.5	Ethnicity/race, enrollment, grade level, affiliation
	Interviews	≥ 15		Interviews	≥ 15	
Area frame	Factor	≤ 1.5	Enrollment, subject, affiliation	Factor	≥ 0.667 and ≤ 1.5	Ethnicity/race, enrollment, grade level, affiliation
	Interviews	≥ 10		Interviews	≥ 15	

<sup>1</sup> The list and area frames were combined for private school teachers.<sup>2</sup> BIE school refers to schools funded by the Bureau of Indian Education (BIE) that are operated by the BIE, a tribe, or a private contractor and not by a regular school district.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2007–08.

This exhibit is used to identify the differences in the criteria used in each adjustment factor calculation. The collapsing criteria apply within a cell, while the collapsing order is used to determine a similar cell with which to collapse. Criteria vary by school sector and type of school.

## School Library Weights for the School Library Media Center Questionnaire

SASS school library data were used to estimate the characteristics of schools with libraries as well as schools without libraries. Whenever possible, sampled schools with libraries and sampled schools without libraries were adjusted separately. Thus, interviewed libraries were weighted up to the weighted estimate of sampled schools known to have libraries, as determined at the time School Library Media Center Questionnaires were distributed. Likewise, the number of interviewed schools with no library was weighted up to the weighted number of all schools without libraries as determined from the questionnaire distribution. This was done to study the characteristics of each type of school. When it was not possible to adjust the library weights by the type of school, all sampled libraries and schools without libraries were adjusted as a whole. This was necessary to handle instances where the existence of the library could not be established during data collection. Due to reporting inconsistencies between the library survey and the school survey, library survey data is not adjusted directly to schools reporting to have libraries on the School Questionnaire.

The final weight for the public school library data is the product of

(Initial School Basic Weight) and (Sampling Adjustment Factor) and (Library Type A, or Unknown status, Nonresponse Adjustment Factor) and (Library Type B, or Known Status, Nonresponse Adjustment Factor) and (First-Stage Ratio-Adjustment Factor)

where:

*Initial School Basic Weight* is the inverse of the probability of selection from the school sample file as reflected at the time of the school sampling

*Sampling Adjustment Factor* is an adjustment that accounts for circumstances that affect the school's probability of selection that are identified after the data collection has begun, such as a merger, duplication, or incorrect building-level collapsing (i.e., a junior high school and a senior high school merge to become a junior/senior high school). Any changes in the school collapsing described in chapter 4 (i.e., uncollapsing or additional collapsing) are adjusted for in this step. The collapsing described in chapter 4 is reflected in the initial basic weight. The base weight used to evaluate response rates and the unit and item bias analysis is produced by multiplying the sampling adjustment factor with the initial basic weight.

*Library Type A (Unknown Status) Nonresponse Adjustment Factor* is an adjustment that accounts for schools that were general refusals or were never contacted and the library status was not known. Because it was not clear if the school had a library or not, this factor adjusts all schools (with and without libraries) together. It is the weighted (product of the initial basic weight and the sampling adjustment factor) ratio of the total school library records to the total in-scope interviewed school libraries plus out-of-scope school libraries.

*Library Type B (Known Status) Nonresponse Adjustment Factor* is an adjustment that accounts for library nonrespondents where the status of the library is known based on the status of the School Library Media Center Questionnaire. Given that schools with libraries were able to be distinguished from schools without libraries, this adjustment was made separately for SASS sampled schools with and without libraries.

*Schools with libraries.* This adjustment is the weighted (product of the initial basic weight and the sampling adjustment factor and the type A nonresponse adjustment factor)

ratio of the interviewed libraries plus the non-interviewed libraries to the interviewed libraries.

*Schools without libraries.* This adjustment is the weighted (product of the initial basic weight and the sampling adjustment factor and the type A nonresponse adjustment factor) ratio of the interviewed schools without libraries plus the non-interviewed schools without libraries to the interviewed schools without libraries

At the conclusion of the nonresponse adjustment procedures, non-interviewed libraries are assigned a weight of zero.

*First-Stage Ratio-Adjustment Factor* is a factor that adjusts the sample estimates to known frame totals. Construction of the frame is described in chapter 4. For public schools, it is equal to the ratio of the total number of SASS frame noncertainty schools (i.e., those schools not selected with certainty as mentioned in chapter 4) to the weighted sample estimate of the total number of noncertainty schools within each weighting class, or cell, defined for this step in the weighting procedure. Certainty schools were excluded from both the numerator and denominators and were assigned a factor equal to one. Since all BIE-funded schools were selected with certainty, this step in the weighting did not apply, so all BIE-funded schools received a factor of one.

This is the same factor that was applied to the SASS school sample.

## **Public, Public Charter, and BIE-Funded School Library Adjustment Cells**

Library non-interview and ratio adjustments were computed within cells.

For all libraries, the types A and B nonresponse adjustment cells were defined the same as those used for the school nonresponse adjustment in the school weighting. The general collapsing criteria were also the same as those used in the school nonresponse adjustment in the school weighting.

For all libraries, the first-stage ratio adjustment cells were the same as those used in the first-stage ratio adjustment in the school weighting. The collapsing criteria were also the same as those used in the first-stage ratio adjustment in the school weighting.

## **Variance Estimation**

This section describes the variance estimation used for the 2007–08 SASS, how the replicates were assigned, and how to use the replicate weights to compute variances.

## **Producing Replicate Weights**

In surveys with complex sample designs, such as SASS, direct estimates of sampling errors that assume a simple random sample will typically underestimate the variability in the estimates. The SASS sample design and estimation included procedures that deviate from the assumption of simple random sampling, such as stratifying the school sample, oversampling new teachers, and sampling with differential probabilities.

The preferred method of calculating sampling errors to reflect these aspects of the complex sample design of SASS is using replication. Replication methods involve constructing a number of subsamples, or replicates, from the full sample and computing the statistic of interest for each replicate. The mean square

error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. The replicate weights are used to compute the variance of a statistic,  $Y$ , as given below:

$$\text{Variance } (Y) = \left( \frac{1}{n} \right) \sum_r (Y_r - Y)^2$$

where:     $Y_r$  = the estimate of  $Y$  using the  $r^{th}$  set of replicate weights.  
                $n$  = the number of replicates.

The SASS surveys completed before 1993 used a procedure known as balanced repeated replication (BRR) for the calculation of sampling variance. BRR assumes sampling is done with replacement, and hence, BRR does not reflect the increase in precision due to sampling a large proportion of a finite population. For most surveys, where the sampling rates are small, the increase in precision will be small and can be disregarded safely. However, with SASS, the public surveys (i.e., school, administrator, school district, teacher, and library) are designed to produce reliable state estimates. This necessarily implies large sampling rates, which can lead to very large overestimates of variance with BRR. Likewise, the private sector surveys (i.e., school, administrator, and teacher) are designed to produce detailed private school affiliation stratum estimates, which also imply large sampling rates, and subsequent overestimation of variance with BRR.

It is possible to adjust the BRR to include a finite population adjustment (FPC). The FPC corrects the standard error in instances where a large proportion of the frame is in sample. However, since SASS uses a probability proportionate to size (PPS) systematic selection procedure, it is not clear what the appropriate FPC would be. It is even possible for an appropriate FPC to be greater than one (see Kaufman 2001).

To overcome this limitation, a bootstrap variance estimator was implemented for the 1993-94 SASS and its role was expanded in 1999–2000 and even more so in the 2003–04 SASS. The bootstrap variance estimator was used for public schools, private list frame noncertainty schools, and public school districts in 1993–94. In 1999–2000, an additional bootstrap estimator was also included for public schools and private list frame certainty schools. The bootstrap estimator used in the 2003–04 SASS was modified from the 1999–2000 estimator to make it more stable. In 2003–04 a new bootstrap estimator for both public and private school teachers was included. The bootstrap variance reflects the increase in precision due to large sampling rates because the bootstrap sampling is done systematically without replacement, as was the original sampling. The 2007–08 SASS used the same bootstrap variance estimation procedure as the 2003–04 SASS.

The idea behind the public school district bootstrap variance estimation is to use the distribution of the sample weights to generate a bootstrap frame. A series of bootstrap samples of a prespecified bootstrap sample size can be selected from the bootstrap frame, respective replicate weights computed, and variances estimated with standard BRR software. This process is repeated for a number of independent samples following the SASS sample design, using variables from the frame. With estimates from a number of samples, a true estimate of the variance is computed. Given the true variance estimate, the bootstrap stratum sample sizes are chosen to get as close as possible to the true stratum variance estimates. Once the bootstrap stratum sample sizes are determined, bootstrap samples and replicate weights are generated for the actual fielded sample using these bootstrap stratum sample sizes. This process indirectly generates an appropriate FPC. For further details see Kaufman (1998). The district bootstrap replicate base weights (inverse of the probability of selection) generated for the fielded sample were subsequently reweighted by processing each set of replicate basic weights through the weighting procedure.

The other bootstrap weights (public schools and teachers and private list frame schools and teacher) were calculated using the updated bootstrap system. This system is based on a series of assumptions about the sampling design: (1) the traditional systematic PPS first-stage sample can be approximated using a randomized systematic sample, and (2) the stratified equal probability systematic sample can be approximated by a stratified without replacement simple random sample. Using these assumptions, the bootstrap replicate weights are computed from a single sample. Again, the appropriate bootstrap replicate base weights (inverse of the probability of selection) generated for the sample were subsequently reweighted by processing each set of replicate base weights through the weighting procedure.

Since the number of certainty schools is substantial, it was decided to treat nonresponse as a stage of sample selection. For certainty schools, this allowed for the reflection of a variance component that otherwise would be regarded as a bias. The nonresponse sampling model is as follows:

- For noncertainty schools, nonresponse is considered a nested random process within selected PSUs. Within appropriately defined cells (see the School Weighting Adjustment Cells and Adjustment Factors Research section, earlier in this chapter), it is assumed nonresponse follows a “missing at random process.”
- For certainty schools, nonresponse is considered the first stage of selection. It is assumed that this process follows a simple random sample without replacement model within appropriately defined cells (see the School Weighting Adjustment Cells and Adjustment Factors Research section earlier in this chapter). The frame size for this selection is assumed to be the number of selected certainty schools in the cell and the sample size is the number of responding certainty schools in the cell.

This procedure also allows for correctly estimating variances for school-based estimates that use school teacher averages generated from the SASS teacher data files.

To be consistent with the bootstrap procedures described above, the nonresponse modeling of certainty schools was reflected through an appropriately defined bootstrap procedure. For more details on the bootstrap methodology and how it applies to SASS, see Efron (1982), Kaufman (1992, 1993, 1994, 1998, and 2001), and Sitter (1990).

The newest version of the bootstrap procedure made it possible to compute teacher bootstrap replicate weights at the same time as the school weights, considerably reducing the processing time to form the replicates.

## Applying Replicate Weights

Each SASS data file includes a set of 88 replicate weights designed to produce variance estimates. Replicate weights were created for each of the 88 samples using the same estimation procedures used for the full sample and are included in the data files. Most of the replicate weights were produced using a bootstrap procedure.

As described above, the replicate weights are used to compute the variance of a statistic,  $Y$ , as given below.

$$\text{Variance } (Y) = \left( \frac{1}{88} \right) \sum_{r=1}^{88} (Y_r - Y)^2$$

where:  $Y_r$  = the estimate of  $Y$  using the  $r^{th}$  set of replicate weights, and the number of replicate weights is 88 for SASS.

Analysis of the bootstrap replicate weights revealed that approximately 3 percent of the school (public and private) and teacher (public and private) weights and approximately 9 percent of the district replicate weights fell outside a 95 percent confidence interval. These are nearly the expected 5 percent, indicating the bootstrap replicate weights are close to normally distributed.

The computation of sampling errors using these replicate weights can be done easily using one of the following software: WesVar Complex Sample Software, SUDAAN (*Research Triangle Institute 2008*), AM Statistical Software, or STATA 9.

- *WesVar*. The user needs to create a new WesVar data file by specifying the full sample weight variable and the replicate weight variables as defined above, and the replication method, BRR. The replicate weights and the full sample weight can be highlighted and dragged to their appropriate place on the “New WesVar Data File” window. For more information, visit [http://www.westat.com/westat/statistical\\_software/wesvar/index.cfm](http://www.westat.com/westat/statistical_software/wesvar/index.cfm).
- *SUDAAN*. The user needs to specify the sample design as a “Balanced Repeated replication” design as well as specifying the replicate weight variables. Specifying the sample design (DESIGN = BRR) is done in the procedure call statement (i.e., PROC DESCRIPT DESIGN = BRR;). The specification of the replicate weights is done with the REPWGT statement (i.e., to produce the sampling errors for estimates from the Principal files use the statement: REPWGT AREPWT1-AREPWT88;). For more information, visit [www.rti.org/sudaan/](http://www.rti.org/sudaan/).
- *AM*. The user needs to set the replicate weights along with the replication method using the right-click context menu in the variable list window. Once the “Set Replicate Weights” window is displayed, the replicate weights as identified above can be highlighted and dragged into the window. At the bottom of the window are four options for the replication method; BRR should be selected. For more information, visit <http://am.air.org>.
- *STATA*. The use of replicate weights for the generation of standard errors was first introduced in STATA 9. First, the user needs to survey set the data (SVY SET) by defining: the probability weight ([pw = ]); balanced repeated replication weights (brrweight(varlist)); variance estimation type (vce(brr)); and turning on the mse formula (mse). Once these parameters are set, users are able to call up the survey settings and tell STATA which type of standard errors to produce using the SVY BRR command. SVY BRR also allows users to specify the statistics to be collected (exp\_list) and the command to perform (e.g., mean or tab). For more information, visit <http://www.stata.com/>.

## **Public and BIE-Funded School and Public and BIE-Funded School Principal Replicates**

The bootstrap estimator as described in the previous section was used for developing both the public school and administrator replicates. The replicate weights for the public and BIE school files are SREPWT1 through SREPWT88. The replicate weights for the public and BIE-funded principals are AREPWT1 through AREPWT88.

## **Private School and Private School Principal Replicates**

For private schools, the list frame used the bootstrap methodology as described above. For the area frame, the PSU sampling rates were very small; consequently, there is no advantage in using the bootstrap. BRR methodology was used in the area frame as it had been for all previous rounds of SASS. Half-samples are

defined by pairing sample PSUs within each sampling stratum, forming variance strata. The final product is 88 replicate weights. After the variance strata were assigned, an orthogonal matrix (matrix  $H$  where  $HH^T = nI_n$  where  $I_n$  is the identity matrix of order  $n$ ) was used to form the 88 balanced half-sample replicates. Thus, the same methodology can be applied to both the list frame and the area frame replicate weights to compute variances. The replicate weights for the private school file are SREPWT1 through SREPWT88.

Private school principal replicate weights were calculated similarly to the school replicate weights. The replicate weights for the private principal file are AREPWT1 through AREPWT88.

### School Library Media Center Replicates

The library replicate weights were developed similarly to the school bootstrap replicate weights. The replicate weights for the public and BIE-funded school library files are MREPWT1 through MREPWT88.

### Teacher Replicates

The teacher replicate weights were generated at the same time as the school replicate weights as part of the 2007–08 bootstrap system.

BRR methodology was employed rather than bootstrap if a teacher was in the private school area frame. Teacher sample records were assigned replicate weights by multiplying the school BRR replicate weight times the teacher's conditional probability of selection given the school is selected in the SASS school sample. The replicate weights for the public, BIE-funded, and private teacher files are TREPWT1 through TREPWT88.

### School District Replicates

To reflect that the districts were selected through the school, the school district bootstrap samples were drawn from a frame that reflected both the public school and district distributions. This frame was the major difference between the district bootstrap methodology and that described above for schools. The replicate weights for the district file are DREPWT1 through DREPWT88.

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## Chapter 10. Reviewing the Quality of SASS Data

National Center for Education Statistics (NCES) program staff members have the responsibility of ensuring that data files are acceptable for public release. Before data files are released to the public, staff members review the data for errors associated with the editing, imputation, and weighting programs. This review incorporates a number of checks that incorporate univariate, bivariate, and multivariate analysis that rigorously examine as many aspects of the data as possible without delaying the timely release of the Schools and Staffing Survey (SASS). The following are aspects of the datasets that were reviewed:

- general data quality;
- nonresponse;
- weighting;
- external data checks; and
- response variance.

### General Data Quality

General data quality included a number of reviews that could be characterized as consistency edits. These checks involved an examination of the individual responses, patterns of response, and summary statistics for variables and data files to ensure consistency within items, respondents, and data files. In addition, key variables and crosstabulations of key variables were examined for distributions and relationships that were expected based upon prior administrations and other research—a check of face validity. The specific data checks included edits, frequency counts, and reasonableness of data, as described below.

**Edits.** The validity of the skip patterns in the questionnaire was established for each SASS questionnaire during the processing of the data; that is, U.S. Census Bureau analysts verified that each item in the questionnaire had the number of responses it should have if skip instructions were followed correctly. Quality checks on the edit specifications were performed and resulted in some corrections (which were treated as a form of imputation).

**Frequency Counts.** Unweighted record counts for every variable were examined from the restricted-use data files. Variables with out-of-range values or inconsistent values were identified, and these values were corrected.

**Reasonableness of Data.** Univariate, bivariate, and multivariate tabulations of key survey variables were obtained and compared to estimates from the previous SASS. Tabulations were reviewed to determine whether the basic relationships observed were within reasonable bounds, allowing for elements of change (such as random fluctuations in variance, or a trend such as overall population growth in a state). The distributions and relationships observed were consistent with expectations.

### Response Rates

Response rates were examined for possible bias, and little evidence of bias at the unit or item level was found. The details of this analysis are discussed in greater detail in chapter 6, but the nonresponse analysis includes a detailed analysis of unit nonresponse and item nonresponse.

**Unit Nonresponse.** Response rates were calculated at the state or affiliation stratum level for all SASS data files. (See chapter 6 for unit response rate information.) Nonresponding districts, schools, principals, teachers, and library media centers were studied in greater detail to identify patterns of unit nonresponse.

(See chapter 6 for information on the nonresponse unit bias analysis.) While no evidence of substantial bias was found, the response rate did not fall below 50 percent for any particular respondents by state or affiliation stratum.

**Item Nonresponse.** The extent of item nonresponse for each SASS data file was determined. (See chapter 6 for item response rate information.) Following this review, four related items were removed from the data files: items 30a-d on the Public School Principal and Private School Principal Data Files. The items were the principal's report of the quality of the teaching faculty, by sorting full-time teachers into four categories of teaching quality. These items did not meet minimum levels of response rates or data quality. Items with high nonresponse rates are identified and reported in tables. However, items with a response rate lower than 70 percent are footnoted as such in published tables.

## **Replicate Weight Checks**

The review of the SASS replicate weights consisted of reviewing the distribution of these weights. The following was done:

1. For each replicate, the weights were totaled. Each replicate total, as well as the average of those numbers, was checked against the full-sample estimate. The standard error of the replicate totals was computed and checked for reasonableness.
2. A check was performed to verify that 95 percent of the replicate weights were contained in an appropriately computed 95 percent confidence interval. This was done with both the basic replicate weights and the final replicate weights.

## **External Data Checks**

One way to verify the external validity of SASS data is to make comparisons to the survey universe, or frame, from which the sample was drawn. For public school districts, schools, principals, and teachers, the external file is an adjusted version of the Common Core of Data (CCD), an annual administrative census of all public schools, Bureau of Indian Education (BIE)-funded schools, and public school districts in the United States and its territories. The corresponding frame for private schools, principals, and teachers is the Private School Universe Survey (PSS).

The sampling frame is drawn from the universe data files which pertain to 2 years prior to the field collection of SASS data. Direct comparison can be made between the estimated count of the survey unit, such as school districts or schools, and the corresponding CCD or PSS count. Such comparisons are usually made between SASS and the sampling frame year of the universe data files.

SASS survey estimates of a characteristic of districts or schools, such as enrollment, were compared to CCD or PSS estimates. The comparisons are usually made to the concurrent years of the universe data files, as the data collected in the field for any given school year are only valid for the same year of the universe, if those concurrent data are available from the universe files. As the CCD for 2006–07 was the first year of data collection under the EDFacts system, potentially only the 2006–07 year data would have been available for comparative purposes within the processing and publication schedule for SASS. This was not deemed to be suitable for comparative purposes, so those comparisons are not presented in the following tables. The number of students attending school or the number of teachers employed is subject to more year-to-year change than the number of schools or districts.

## Public School District Unit Count Comparison (Public School District Data File)

Comparisons of the number of public school districts by state and region were made to the CCD 2005–06 Public Education Agency Universe. The CCD estimates are independent from SASS, because SASS collects its data directly from school districts that are in sample and CCD data are collected from the state education agencies. For the 2007–08 SASS, the district sample consisted of the set of districts that were associated with the SASS public school sample and included public charter schools that operated independently of a public school district. The districts in scope (i.e., eligible) for SASS were those that employed elementary- and/or secondary-level teachers and were in operation in the 2007–08 school year. CCD utilizes a less restrictive definition of a district and collects information on supervisory unions and districts that neither administer schools nor hire teachers.

Thus, two SASS-CCD comparisons were made; one to the total number of CCD districts for the state and one to the number of “regular” CCD districts (as defined by CCD) in the state. Depending upon the number of out-of-scope districts in each particular state, the SASS estimates are closer either to the total number of districts or to the number of regular districts in CCD. Comparisons of counts of public school districts by state between CCD and SASS are shown in tables 67 and 68. The first table compares the estimated number of public school districts in SASS (calculated using the district final weight) to the number of total and regular school districts in the 2005–06 CCD Public Education Agency Universe. The second table compares the estimated number of public school districts in SASS (calculated using the district base weight) with the adjusted frame developed by the sampling statisticians at the U.S. Census Bureau in preparation for SASS data collection. These are two different measures of “fit” between the weighted count from SASS and the frame count of districts. The sampling frame version of CCD used in table 68 is between the total number of districts and the number of regular districts.

**Table 67. Estimated number and percentage of public school districts in the 2007–08 SASS compared with total and regular districts in 2005–06 CCD Public Education Agency Universe, by state and region: 2005–06 and 2007–08**

State and region (1)	2007–08									
	2005–06		SASS frame total		2007–08 SASS frame		2007–08 SASS frame		SASS estimate as a percent- age of CCD districts	
	2005–06 CCD regular districts	regular district <sup>1</sup> with students <sup>2</sup>	2005–06 CCD districts	2005–06 CCD districts with charter and state-run schools <sup>3</sup>	2005–06 CCD districts without charter and state-run schools <sup>4</sup>	2007–08 SASS frame (charter and state-run districts only) <sup>5</sup>	2007–08 SASS frame (charter and state run) <sup>6</sup>	2007–08 SASS districts (without charter and state run only) <sup>7</sup>	2007–08 SASS districts (charter and state run only) <sup>7</sup>	SASS estimate as a percent- age of 2007–08 SASS frame <sup>9</sup>
Total	14,199	13,832	17,009	14,989	2,020	14,238	2,095	83.7	95.0	
<b>State</b>										
Alabama	165	132	164	164	0	136	0	82.9	82.9	
Alaska	54	54	54	54	0	54	0	100.0	100.0	
Arizona	218	207	585	228	357	240	373	41.0	105.3	
Arkansas	253	252	282	271	11	262	18	92.9	96.7	
California	987	987	1,157	1,139	18	1,066	31	92.1	93.6	
Colorado	179	179	183	181	2	183	0	100.0	101.1	
Connecticut	166	166	193	172	21	179	19	92.7	104.1	
Delaware	19	19	38	23	15	24	15	63.2	104.3	
District of Columbia	1	1	49	1	48	1	41	2.0	100.0	
Florida	67	67	77	74	3	71	11	92.2	95.9	
Georgia	180	180	189	181	8	187	6	98.9	103.3	
Hawaii	1	1	1	1	0	1	0	100.0	100.0	
Idaho	122	122	126	118	8	119	8	94.4	100.8	
Illinois	875	873	1,000	994	6	941	0	94.1	94.7	
Indiana	294	292	345	313	32	311	32	90.1	99.4	
Iowa	365	365	365	365	0	365	0	100.0	100.0	
Kansas	300	300	306	294	12	305	9	99.7	103.7	
Kentucky	176	176	235	233	2	207	53	88.1	88.8	
Louisiana	68	68	88	70	18	86	6	97.7	122.9	
Maine	285	222	236	232	4	173	9	73.3	74.6	
Maryland	24	24	26	26	0	25	0	96.2	96.2	
Massachusetts	350	244	390	330	60	342	45	87.7	103.6	
Michigan	552	551	841	619	222	593	245	70.5	95.8	
Minnesota	343	341	527	385	142	376	135	71.3	97.7	
Mississippi	152	152	163	152	11	161	10	98.8	105.9	
Missouri	524	522	532	528	4	529	27	99.4	100.2	
Montana	430	430	370	368	2	347	3	93.8	94.3	
Nebraska	474	449	491	487	4	250	3	50.9	51.3	
Nevada	17	17	18	18	0	17	0	94.4	94.4	
New Hampshire	179	165	182	178	4	109	4	59.9	61.2	

See notes at end of table.

**Table 67. Estimated number and percentage of public school districts in the 2007–08 SASS compared with total and regular districts in 2005–06 CCD Public Education Agency Universe, by state and region: 2005–06 and 2007–08—Continued**

State and region (1)	2007–08									SASS estimate as a percent- age of CCD districts with schools <sup>8</sup>	SASS estimate as a percent- age of 2007–08 SASS frame <sup>9</sup>		
	2005–06		2007–08		2005–06		2007–08						
	CCD regular districts with students <sup>2</sup>	SASS frame total districts	CCD with charter and state-run schools <sup>3</sup>	SASS frame without charter and state-run schools <sup>4</sup>	CCD charter and state-run districts <sup>5</sup>	SASS frame (charter and state-run only) <sup>6</sup>	SASS districts (without charter and state run only) <sup>7</sup>	SASS districts (charter and state run only) <sup>7</sup>					
State—Continued													
New Jersey	615	592	649	595	54	611	40	94.1	102.7				
New Mexico	89	89	89	89	0	93	0	104.5	104.5				
New York	730	729	847	763	84	780	61	92.1	102.2				
North Carolina	115	115	217	116	101	142	76	65.4	122.4				
North Dakota	204	198	232	229	3	196	0	84.5	85.6				
Ohio	614	612	1,068	752	316	688	267	64.4	91.5				
Oklahoma	540	540	592	589	3	583	46	98.5	99.0				
Oregon	200	198	202	199	3	202	0	100.0	101.5				
Pennsylvania	501	500	725	599	126	591	116	81.5	98.7				
Rhode Island	32	32	50	29	21	45	11	90.0	155.2				
South Carolina	85	85	104	100	4	101	23	97.1	101.0				
South Dakota	168	165	177	174	3	168	0	94.9	96.6				
Tennessee	136	136	138	138	0	138	0	100.0	100.0				
Texas	1,035	1,033	1,266	1,057	209	1,088	265	85.9	102.9				
Utah	40	40	97	59	38	50	46	51.5	84.7				
Vermont	302	241	268	267	1	80	0	29.9	30.0				
Virginia	134	130	206	183	23	185	22	89.8	101.1				
Washington	296	296	301	301	0	300	0	99.7	99.7				
West Virginia	55	55	58	56	2	55	8	94.8	98.2				
Wisconsin	440	440	448	433	15	429	14	95.8	99.1				
Wyoming	48	48	62	62	0	56	0	90.3	90.3				
Region													
Northeast	3,160	2,891	3,540	3,165	375	2,909	306	82.2	91.9				
Midwest	5,153	5,108	6,332	5,573	759	5,150	732	81.3	92.4				
South	3,205	3,165	3,892	3,434	458	3,451	597	88.7	100.5				
West	2,681	2,668	3,245	2,817	428	2,728	460	84.1	96.8				

<sup>1</sup> Overview of Public and Secondary Schools and Districts: School Year 2005–06 (NCES 2007-353), Table 2, Column 3. (Regular school districts include those that are components of supervisory unions.)

<sup>2</sup> Overview of Public and Secondary Schools and Districts: School Year 2005–06 (NCES 2007-353), Table 1, Column 2.

<sup>3</sup> Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdagn05\_combined.sas7bdat.

<sup>4</sup> Schools and Staffing Survey (SASS), 2007–08 SASS Frame (CCD 2005–06 with adjustments) “Final District Frame File” (only includes regular school districts).

<sup>5</sup> Schools and Staffing Survey (SASS), 2007–08 SASS Frame (CCD 2005–06 with adjustments) “Final District Frame File” (only includes charter and state run districts).

<sup>6</sup> Schools and Staffing Survey (SASS), “District Data File,” 2007–08 (Final Weight—only includes regular school districts).

<sup>7</sup> Schools and Staffing Survey (SASS), “District Data File,” 2007–08 (Final Weight—only includes charter school and state run districts).

<sup>8</sup> Calculated by dividing column 7 by column 4.

<sup>9</sup> Calculated by dividing column 7 by column 5.

NOTE: CCD refers to the Common Core of Data. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Final District Frame Data File and District Data File,” 2007–08; Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdagn05\_combined.sas7bdat; *Overview of Public and Secondary Schools and Districts: School Year 2005–06*, Common Core of Data (CCD), “Local Education Agency Universe Survey,” 2005–06.

In the 2003–04 SASS, the sample selection for districts included “other” types of districts that have become more common in CCD. These “other” types of districts are largely either administrative units that oversee charter schools or independent charter schools that are recognized within their state as if they were districts. Methodologically, single-school districts, some public charter schools, and some state and federally-run schools were not sent a separate district questionnaire but instead received the Public School Questionnaire (With District Items). The Public School Questionnaire (With District Items) incorporated most, but not all, district-level items into the school questionnaire.

When the data files were created from the questionnaires, district-level data for these “other” types of districts were included on the Public School District Data File, with the exception of charter school data for public charter schools that are under the jurisdiction of a regular school district. It is important to include these district-level data for a single-school district, state or federally funded school, or public charter school record on the Public School District Data File in order to approximate the district data reported by CCD and to provide SASS data for “other” types of districts that exist at the elementary and secondary level. Table 68 provides the comparison between the total district count in CCD and the SASS estimate of districts, including those for public charter or state-run schools.

Differences in the count of districts between CCD and SASS do occur for various reasons. In New England, the main reason why CCD and SASS estimates diverge is because CCD counts all local districts as districts. SASS, however, defines a district as an entity that operates at least one school and is responsible for hiring, firing, and setting policies. In Vermont and, to some extent, in Maine, the functions that define a district in SASS are performed by the supervisory union, school union, or co-op. Supervisory unions, school unions, or co-ops may oversee several districts, as defined by CCD. Consequently, the “district of record” in CCD may not actually be the district that directs the operations for these small, rural schools.

The adjusted SASS sampling frame reflects the changes that are made to better fit the SASS definition of eligible districts for sampling. Even after those adjustments are made, there are still some remaining discrepancies between the SASS sampling frame and the actual sample, as shown in the rightmost column of table 67. In general, it is not possible to completely subtract districts that would be ineligible for SASS from CCD, because they are not always readily identifiable. For example, in some states supervisory units may oversee school operations, while in other states that is not as common.

**Table 68. Estimated number and percentage of public school districts in the 2007–08 SASS compared with total public school districts in the 2005–06 CCD Public Education Agency Universe, by state and region: 2005–06 and 2007–08**

State and region (1)	2005–06 CCD total districts (2)	2007–08 SASS frame total districts with charter and state-run schools (3)	2007–08 SASS total districts (including charter and state-run) (4)	SASS estimate as a percentage of CCD total districts <sup>1</sup> (5)	SASS estimate as a percentage of 2007–08 SASS frame <sup>2</sup> (6)
		18,169	17,009	89.9	96.0
<b>State</b>					
Alabama	165	164	136	82.4	82.9
Alaska	54	54	54	100.0	100.0
Arizona	609	585	613	100.7	104.8
Arkansas	293	282	280	95.6	99.3
California	1,132	1,157	1,097	96.9	94.8
Colorado	202	183	183	90.6	100.0
Connecticut	196	193	197	100.5	102.1
Delaware	39	38	39	100.0	102.6
District of Columbia	54	49	42	77.8	85.7
Florida	74	77	82	110.8	106.5
Georgia	204	189	193	94.6	102.1
Hawaii	1	1	1	100.0	100.0
Idaho	126	126	127	100.8	100.8
Illinois	1,106	1,000	941	85.1	94.1
Indiana	366	345	343	93.7	99.4
Iowa	379	365	365	96.3	100.0
Kansas	313	306	314	100.3	102.6
Kentucky	196	235	260	132.7	110.6
Louisiana	97	88	92	94.8	104.5
Maine	331	236	182	55.0	77.1
Maryland	26	26	25	96.2	96.2
Massachusetts	496	390	387	78.0	99.2
Michigan	832	841	838	100.7	99.6
Minnesota	574	527	511	89.0	97.0
Mississippi	163	163	170	104.3	104.3
Missouri	532	532	556	104.5	104.5
Montana	528	370	350	66.3	94.6
Nebraska	558	491	253	45.3	51.5
Nevada	19	18	17	89.5	94.4
New Hampshire	268	182	112	41.8	61.5
New Jersey	673	649	651	96.7	100.3
New Mexico	89	89	93	104.5	104.5
New York	867	847	841	97.0	99.3
North Carolina	216	217	218	100.9	100.5
North Dakota	254	232	196	77.2	84.5

See notes at end of table.

**Table 68. Estimated number and percentage of public school districts in the 2007–08 SASS compared with total public school districts in the 2005–06 CCD Public Education Agency Universe, by state and region: 2005–06 and 2007–08—Continued**

State and region (1)	2005–06 CCD total districts (2)	2007–08 SASS frame total districts with charter and state-run schools (3)	2007–08 SASS total districts (including charter and state-run) (4)	SASS estimate as a percentage of CCD total districts <sup>1</sup> (5)	SASS estimate as a percentage of 2007–08 SASS frame <sup>2</sup> (6)
<b>State—Continued</b>					
Ohio	1,231	1,068	955	77.6	89.4
Oklahoma	602	592	629	104.5	106.3
Oregon	221	202	202	91.4	100.0
Pennsylvania	738	725	708	95.9	97.7
Rhode Island	50	50	57	114.0	114.0
South Carolina	102	104	124	121.6	119.2
South Dakota	188	177	168	89.4	94.9
Tennessee	136	138	138	101.5	100.0
Texas	1,291	1,266	1,352	104.7	106.8
Utah	99	97	96	97.0	99.0
Vermont	365	268	80	21.9	29.9
Virginia	226	206	206	91.2	100.0
Washington	306	301	300	98.0	99.7
West Virginia	57	58	63	110.5	108.6
Wisconsin	463	448	443	95.7	98.9
Wyoming	62	62	56	90.3	90.3
<b>Region</b>					
Northeast	3,984	3,540	3,215	80.7	90.8
Midwest	6,796	6,332	5,883	86.6	92.9
South	3,941	3,892	4,048	102.7	104.0
West	3,448	3,245	3,188	92.5	98.2

<sup>1</sup> Calculated by dividing column 4 by column 2.<sup>2</sup> Calculated by dividing column 4 by column 3.

NOTE: Total school districts include all types of education agencies that manage traditional public or public charter schools.

CCD refers to the Common Core of Data. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Preliminary Public Education Agency Universe Survey File," 2005–06; Schools and Staffing Survey (SASS), "Final District Frame Data File," 2007–08.

## Public School Unit Count Comparison (Public School and BIE<sup>29</sup> School Data Files)

Comparisons of the number of public schools in SASS were made to the total number of public schools and the number of public schools with students in the 2005–06 CCD, the year from which SASS drew its sample of schools. The number of public schools in SASS is 3.9 percentage points smaller than the number of CCD public schools with students (table 69). Two states have an estimated number of public schools for SASS that is below 90 percent of the SASS frame: Minnesota and Nebraska. In Florida, Minnesota, and Nebraska, there was an unexpectedly large number of out-of-scope schools on the sampling frame. Minnesota had a large number of alternative learning centers and other school-within-a-school units. Nebraska underwent a massive district consolidation in school year 2006–07 that led to the closing of many one-room schools. The consolidation was not reflected in the 2005–06 CCD. Florida contained a large number of schools that were expected to open in 2006 but had not been opened and were still not operational in 2007–08.

There were 11 states in which SASS estimates of public schools are higher than the adjusted CCD (SASS frame) estimates: Arkansas, Colorado, Hawaii, Kansas, Maryland, Maine, Mississippi, Missouri, Montana, Nebraska, and Ohio. Two of those states differ from the CCD estimates (Mississippi and Missouri) by less than 1 percentage point, while the SASS estimates for the other nine range from 1.0 percentage point to 4.6 percentage points higher than the adjusted CCD (SASS frame) counts. Overall, the percentage difference between SASS and the frame year CCD count of public schools was 11.8; this narrows to 3.9, once the school collapsing operation is taken into consideration. The school collapsing operation described in chapter 4 was expected to reduce the consistency of the count of schools between CCD (particularly in the frame year) and SASS, in some states. These are states in which K–12 schools may be broken up administratively into several different schools for either internal state administrative reasons or for reporting to CCD.

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<sup>29</sup> BIE refers to the Bureau of Indian Education. In fall 2007, the Bureau of Indian Affairs (BIA) was reorganized and the new entity within BIA overseeing schools was renamed the Bureau of Indian Education (BIE).

**Table 69. Estimated number and percentage of public and BIE-funded schools in 2007–08 SASS compared with 2005–06 CCD, by state and region: 2005–06 and 2007–08**

Characteristic (1)	2005–06 CCD public schools <sup>1</sup> (2)	2005–06 CCD public schools (published count) <sup>2</sup> (3)	2005–06 CCD with adjustments <sup>3</sup> (4)	2007–08 SASS public schools <sup>4</sup> (5)	SASS estimate as a percentage of CCD <sup>5</sup> (6)	SASS estimate as a percentage of SASS frame <sup>6</sup> (7)
Total	102,952	97,382	94,437	90,756	88.2	96.1
<b>State</b>						
Alabama	1,606	1,585	1,575	1,479	92.1	93.9
Alaska	525	502	511	482	91.8	94.3
Arizona	2,147	2,078	2,038	1,917	89.3	94.1
Arkansas	1,174	1,138	980	993	84.6	101.3
California	9,973	9,650	9,856	9,304	93.3	94.4
Colorado	1,730	1,707	1,582	1,598	92.4	101.0
Connecticut	1,120	1,111	1,073	1,061	94.7	98.9
Delaware	235	222	226	211	89.8	93.4
District of Columbia	231	229	222	200	86.6	90.1
Florida	4,313	3,723	3,607	3,326	77.1	92.2
Georgia	2,513	2,389	2,406	2,318	92.2	96.3
Hawaii	285	285	284	297	104.2	104.6
Idaho	731	706	702	695	95.1	99.0
Illinois	4,529	4,401	4,141	4,079	90.1	98.5
Indiana	2,026	1,977	1,943	1,894	93.5	97.5
Iowa	1,566	1,512	1,319	1,297	82.8	98.3
Kansas	1,414	1,407	1,356	1,370	96.9	101.0
Kentucky	1,475	1,409	1,428	1,360	92.2	95.2
Louisiana	1,562	1,390	1,500	1,380	88.3	92.0
Maine	687	679	668	684	99.6	102.4
Maryland	1,446	1,430	1,413	1,429	98.8	101.1
Massachusetts	1,908	1,879	1,803	1,797	94.2	99.7
Michigan	4,175	4,090	3,872	3,689	88.4	95.3
Minnesota	2,770	2,644	2,295	1,927	69.6	84.0
Mississippi	1,056	1,051	1,045	1,052	99.6	100.7
Missouri	2,374	2,361	2,002	2,021	85.1	100.9
Montana	863	840	568	582	67.4	102.5
Nebraska	1,288	1,225	1,041	902	70.0	86.6
Nevada	577	557	546	532	92.2	97.4
New Hampshire	488	480	460	448	91.8	97.4
New Jersey	2,581	2,474	2,493	2,463	95.4	98.8
New Mexico	885	854	769	716	80.9	93.1
New York	4,782	4,669	4,672	4,628	96.8	99.1
North Carolina	2,351	2,347	2,342	2,378	101.1	101.5
North Dakota	551	539	407	370	67.2	90.9

See notes at end of table.

**Table 69. Estimated number and percentage of public and BIE-funded schools in 2007–08 SASS compared with 2005–06 CCD, by state and region: 2005–06 and 2007–08—Continued**

Characteristic (1)	2005–06 CCD public schools <sup>1</sup> (2)	2005–06 CCD public schools with or without students (published count) <sup>2</sup> (3)	2007–08 SASS frame (2005–06 CCD with adjustments) <sup>3</sup> (4)	2007–08 SASS public schools <sup>4</sup> (5)	SASS estimate as a percentage of CCD <sup>5</sup> (6)	SASS estimate as a percentage of SASS frame <sup>6</sup> (7)
State—Continued						
Ohio	4,299	4,007	3,935	3,641	84.7	92.5
Oklahoma	1,800	1,788	1,511	1,560	86.7	103.2
Oregon	1,262	1,260	1,248	1,189	94.2	95.3
Pennsylvania	3,289	3,250	3,340	3,219	97.9	96.4
Rhode Island	346	338	329	314	90.8	95.4
South Carolina	1,187	1,152	1,157	1,095	92.2	94.6
South Dakota	731	725	479	462	63.2	96.5
Tennessee	1,726	1,700	1,669	1,626	94.2	97.4
Texas	8,999	8,517	8,670	8,289	92.1	95.6
Utah	1,009	956	967	925	91.7	95.7
Vermont	396	392	350	342	86.4	97.7
Virginia	2,109	2,079	2,042	1,989	94.3	97.4
Washington	2,298	2,269	2,175	2,119	92.2	97.4
West Virginia	805	784	786	748	92.9	95.2
Wisconsin	2,297	2,246	2,049	2,031	88.4	99.1
Wyoming	384	379	347	327	85.2	94.2
Region						
Northeast	15,597	15,272	15,188	14,956	95.9	98.5
Midwest	28,020	27,134	24,839	23,684	84.5	95.4
South	34,588	32,933	32,579	31,433	90.9	96.5
West	22,669	22,043	21,593	20,682	91.2	95.8
BIE schools only	189	181	178	177	93.7	99.4

<sup>1</sup> Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdsch05\_combined.sas7bdat (only includes schools that are not closed). The CCD total is not the sum of the detail because it includes 1,820 schools in territories, 189 Bureau of Indian Education (BIE) schools, and 69 domestic Department of Defense schools, which CCD does not assign to a specific state.

<sup>2</sup> *Overview of Public and Secondary Schools and Districts: School Year 2005–06* (NCES 2007-354), Table 2, Column 1.

<sup>3</sup> Schools and Staffing Survey (SASS), 2007–08 SASS Final Public School Frame (2005–06 CCD with Adjustments), “Final Public School Frame Data file,” 2007–08 (Final Basic Weight).

<sup>4</sup> Schools and Staffing Survey (SASS), “Public School and BIE School Data Files,” 2007–08 (Final School Weight).

<sup>5</sup> Calculated by dividing column 5 by column 2.

<sup>6</sup> Calculated by dividing column 5 by column 4.

NOTE: CCD refers to the Common Core of Data. BIE refers to the Bureau of Indian Education. Detail may not sum to totals because of rounding. Total does not include BIE schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdsch05\_combined.sas7bdat; Schools and Staffing Survey (SASS), “Final Public School Frame, Public School, and BIE School Data Files,” 2007–08.

## **Public School Student Count Comparison (Public School and BIE School Data Files)**

Comparisons of the number of public school students in SASS were made to the frame year of CCD from the published student counts for 2005–06 (table 70). Two comparisons were made—one to the CCD total number of students and the other to the CCD K–12 student count. The latter count does not include prekindergarten students. The SASS student counts are for K–12 grade levels, as long as the school offering kindergarten also offers first grade. While there are at least some public schools included in CCD’s definition of K–12 that may not have been eligible for SASS, in general most public school students in kindergarten would be eligible as students in SASS; therefore, it does not make sense to exclude kindergarten from the student counts when making the comparison to CCD.

Overall, the SASS student count is about 2 percent lower than CCD’s count of total K–12 students from 2 years prior to SASS (table 70). There were 707,940 prekindergarten students included in CCD in 2005–06. California reported one prekindergarten student in 2005–06, and Michigan reported zero. Excluding the prekindergarten students brings the SASS student count into a closer degree of “fit” than was achieved with the comparison of the number of schools in SASS to CCD. However, excluding the prekindergarten students enlarges the amount of difference in those states for which SASS has a higher number of students than the pre-K–12 frame-year CCD counts. Population growth (i.e., births and/or migration) may account for the SASS count in 2007–08 being higher in some states than the frame year CCD count. However, that does not help to explain why the SASS count of students in 2007–08 is lower for 33 states than the adjusted frame-year CCD count.

There were 17 states in which the amount of the difference between the adjusted 2005–06 CCD and SASS was 5 percent or more, in either direction: Alabama, Alaska, Arizona, Arkansas, California, Delaware, District of Columbia, Florida, Iowa, Louisiana, Maryland, Nebraska, New York, North Carolina, North Dakota, Texas, and Virginia. The remaining states with a higher student count in the SASS frame than that from the 2007–08 SASS differed by less than 5 percent. The amount of that difference may be reduced in some states when comparing the SASS data to the same year of CCD, if those data were available (which they were not when this report was being prepared). There were 17 states in which the absolute number of students was higher in SASS compared to the 2005–06 CCD: Arizona, Arkansas, Connecticut, Idaho, Iowa, Kansas, Massachusetts, Minnesota, Mississippi, Montana, Ohio, Oklahoma, Rhode Island, Texas, West Virginia, Wisconsin, and Wyoming. Some of these changes were relatively small; and some of these states are among those that have sometimes had overreporting of enrollment and teachers in SASS. This may indicate that the school collapsing operation narrowed, but did not entirely eliminate, the overreporting of students in some states and perhaps overcompensated on the overreporting in other states.

**Table 70. Estimated number and percentage of public and BIE-funded school students in 2007–08 SASS compared to 2005–06 CCD, by state and region: 2005–06 and 2007–08**

Characteristic (1)	2005–06 CCD public students <sup>1</sup> (2)	2005–06 CCD public students less pre-K <sup>2</sup> (3)	2007–08 SASS public students <sup>3</sup> (4)	SASS as a percentage of CCD public students less pre-K <sup>4</sup> (5)
Total	50,295,602	49,587,662	48,479,823	97.8
State				
Alabama	809,172	805,636	757,670	94.0
Alaska	136,407	134,493	113,481	84.4
Arizona	1,098,006	1,089,183	1,143,517	105.0
Arkansas	483,668	475,049	500,593	105.4
California	6,585,036	6,585,035	6,219,589	94.5
Colorado	772,365	755,493	736,760	97.5
Connecticut	577,059	567,029	590,627	104.2
Delaware	133,280	132,681	115,132	86.8
District of Columbia	76,867	72,075	57,327	79.5
Florida	2,720,426	2,679,620	2,512,545	93.8
Georgia	1,731,214	1,689,694	1,630,263	96.5
Hawaii	185,066	183,654	180,992	98.6
Idaho	268,823	266,425	267,377	100.4
Illinois	2,133,540	2,077,045	2,022,385	97.4
Indiana	1,058,259	1,050,681	1,050,286	100.0
Iowa	482,669	477,149	511,379	107.2
Kansas	465,598	463,794	466,397	100.6
Kentucky	684,686	677,342	661,853	97.7
Louisiana	726,555	706,345	647,698	91.7
Maine	200,430	198,770	197,407	99.3
Maryland	864,398	842,160	791,649	94.0
Massachusetts	961,566	944,115	975,515	103.3
Michigan	1,740,957	1,740,957	1,664,917	95.6
Minnesota	878,032	873,372	895,348	102.5
Mississippi	520,591	518,424	519,401	100.2
Missouri	928,842	920,145	912,810	99.2
Montana	145,400	144,750	147,546	101.9
Nebraska	289,499	284,873	256,112	89.9
Nevada	413,315	410,675	399,296	97.2
New Hampshire	210,830	208,794	200,354	96.0
New Jersey	1,397,698	1,378,350	1,338,541	97.1
New Mexico	322,513	318,701	316,930	99.4
New York	2,870,820	2,835,013	2,578,833	91.0
North Carolina	1,428,052	1,410,785	1,319,923	93.6
North Dakota	101,202	100,440	92,985	92.6

See notes at end of table.

**Table 70. Estimated number and percentage of public and BIE-funded school students in 2007–08 SASS compared to 2005–06 CCD, by state and region: 2005–06 and 2007–08—Continued**

Characteristic (1)	2005–06 CCD public students <sup>1</sup> (2)	2005–06 CCD public students less pre-K <sup>2</sup> (3)	2007–08 SASS public students <sup>3</sup> (4)	SASS as a percentage of CCD public students less pre-K <sup>4</sup> (5)
State—Continued				
Ohio	1,929,487	1,906,106	1,926,271	101.1
Oklahoma	650,282	622,316	642,622	103.3
Oregon	538,453	538,011	534,618	99.4
Pennsylvania	1,874,321	1,868,093	1,803,977	96.6
Rhode Island	154,466	153,328	153,612	100.2
South Carolina	723,262	702,184	692,274	98.6
South Dakota	121,981	120,963	120,217	99.4
Tennessee	959,360	950,266	936,393	98.5
Texas	4,709,957	4,544,059	4,785,073	105.3
Utah	548,297	545,144	540,064	99.1
Vermont	105,517	103,189	99,748	96.7
Virginia	1,279,968	1,262,767	1,160,569	91.9
Washington	1,039,228	1,029,233	996,313	96.8
West Virginia	294,505	286,073	299,035	104.5
Wisconsin	879,060	853,005	909,572	106.6
Wyoming	84,617	84,178	86,025	102.2
Region				
Northeast	8,352,707	8,256,681	7,938,614	96.1
Midwest	11,009,126	10,868,530	10,828,679	99.6
South	18,796,243	18,377,476	18,030,020	98.1
West	12,137,526	12,084,975	11,682,510	96.7
BIE students only	62,027	62,027	49,062	79.1

<sup>1</sup> Common Core of Data (CCD), “Preliminary File,” 2005–06, *ccdsch05\_combined*, Total Student Count.<sup>2</sup> Common Core of Data (CCD), “Preliminary File,” 2005–06, *ccdsch05\_combined.sas7bdat*, Total Student Count without Total Prekindergarten Students.<sup>3</sup> Schools and Staffing Survey (SASS), “Public School and BIE School Data Files,” 2007–08, (Total Student Count, School Final Weight).<sup>4</sup> Calculated by dividing column 4 by column 3.

NOTE: CCD refers to the Common Core of Data. BIE refers to the Bureau of Indian Education. Detail may not sum to totals because of rounding. Total does not include BIE students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Preliminary File,” 2004–05 and 2005–06, *ccdsch05\_combined.sas7bdat*; Schools and Staffing Survey (SASS), “Final Public School Frame, Public School, and BIE School Data Files,” 2007–08.

## Public Charter School Comparison (Public School Data File)

Public charter schools in the 2007–08 SASS were selected to be representative of the United States overall, because the data on public charter schools would be published only at the national level. Although the overall sample is representative at the national level only, the sample does attempt to be representative for those states with a large number of public charter schools. States with fewer public charter schools were all sampled together, and states with no public charter schools were excluded from the sampling. The comparisons that are shown in table 71 should not be interpreted as a critique of the sampling that was employed to draw a national sample. Rather, the comparisons show how closely the sample does or does not fit to subnational counts of public charter schools as identified in the CCD frame year. Comparisons are made to the frame year from CCD, as opposed to the concurrent data collection year, because the sample as drawn from the frame year does not include any newly-created schools. This is of particular importance for public charter schools, which are counted by CCD only after the state grants a charter for the school and permits the school to begin operation.

**Table 71. Estimated number and percentage of public charter schools in 2007–08 SASS compared to 2005–06 CCD, by state and region: 2005–06 and 2007–08**

State and region (1)	2005–06 2005–06	2005–06 CCD	2007–08 SASS	2007–08 SASS	2007–08 SASS	SASS estimate	SASS estimate	
	public charter schools (published schools) <sup>1</sup>	public charter schools (published count) <sup>2</sup>	frame (2005–06 CCD with adjust- ments) <sup>3</sup>	public charter schools (CCD identified) <sup>4</sup>	public charter schools (CHARFLAG = 1) <sup>5</sup>	as a percent- age of CCD <sup>6</sup>	as a percent- age of SASS frame <sup>7</sup>	(CHARFLAG = 1) as a percentage of CCD <sup>8</sup>
Total	4,104	3,780	3,849	3,344	3,574	81.5	86.9	87.1
<b>State</b>								
Alaska	23	23	23	19	19	82.6	82.6	82.6
Arizona	501	501	453	368	408	73.5	81.2	81.4
California	620	543	600	526	557	84.8	87.7	89.8
Colorado	121	121	118	117	117	96.7	99.2	96.7
Delaware	16	13	16	14	14	87.5	87.5	87.5
District of Columbia	52	52	48	41	41	78.8	85.4	78.8
Florida	426	342	329	298	298	70.0	90.6	70.0
Georgia	60	58	60	39	39	65.0	65.0	65.0
Hawaii	27	27	27	32	32	118.5	118.5	118.5
Idaho	30	26	30	13	13	43.3	43.3	43.3
Indiana	35	29	35	29	29	82.9	82.9	82.9
Louisiana	31	26	31	34	34	109.7	109.7	109.7
Massachusetts	59	59	59	53	53	89.8	89.8	89.8
Michigan	264	264	257	264	265	100.0	102.7	100.4
Minnesota	169	161	155	105	120	62.1	67.7	71.0
New Jersey	54	54	54	53	53	98.1	98.1	98.1
New Mexico	59	53	55	40	46	67.8	72.7	78.0
New York	79	79	79	88	88	111.4	111.4	111.4
North Carolina	99	99	97	105	107	106.1	108.2	108.1
Ohio	413	316	393	278	278	67.3	70.7	67.3

See notes at end of table.

**Table 71. Estimated number and percentage of public charter schools in 2007–08 SASS compared to 2005–06 CCD, by state and region: 2005–06 and 2007–08—Continued**

State and region (1)	2005–06	2007–08	2007–08	2007–08	SASS	SASS	SASS
	CCD public charter schools (published count) <sup>2</sup>	SASS frame (2005–06 CCD with adjust- ments) <sup>3</sup>	SASS public charter schools (CCD identified) <sup>4</sup>	SASS public charter schools (CHARFLAG = 1) <sup>5</sup>	estimate as a percent- age of SASS frame <sup>7</sup>	estimate as a percent- age of SASS frame <sup>7</sup>	estimate as a percent- age of SASS frame <sup>7</sup>
<b>State—Continued</b>							
Pennsylvania	117	116	116	117	117	100.0	100.9
Texas	353	319	347	310	318	87.8	89.3
Utah	45	36	43	64	75	142.2	148.8
Wisconsin	187	181	177	159	178	85.0	89.8
All other states	264	282	247	178	276	67.4	72.1
<b>Region</b>							
Northeast	344	339	342	331	331	96.2	96.8
Midwest	1,129	1,035	1,073	890	958	78.8	82.9
South	1,128	1,000	1,015	897	952	79.5	88.4
West	1,503	1,406	1,419	1,227	1,333	81.6	86.5

<sup>1</sup> Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdsch05\_combined, Charter School Indicator.

<sup>2</sup> *Overview of Public and Secondary Schools and Districts: School Year 2005–06* (NCES 2007-354), Table 2, Column 6.

<sup>3</sup> Schools and Staffing Survey (SASS), 2007–08 SASS Public School Frame (CCD 2005–06 with Adjustments), Charter School Indicator.

<sup>4</sup> Schools and Staffing Survey (SASS), “Public School (Charter Schools Only) and BIE School Data Files,” 2007–08 (CCD Identified, Final School Weight).

<sup>5</sup> Schools and Staffing Survey (SASS), “Public School (Charter Schools Only) and BIE School Data Files,” 2007–08 (Final School Weight).

<sup>6</sup> Calculated by dividing column 5 by column 2.

<sup>7</sup> Calculated by dividing column 5 by column 4.

<sup>8</sup> Calculated by dividing column 6 by column 2.

NOTE: CCD refers to the Common Core of Data. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdsch05\_combined.sas7bdat; Schools and Staffing Survey (SASS), “Final Public School Frame, Public School, and BIE School Data Files,” 2007–08.

## Private School Comparison (Private School Data File)

Comparisons were made of the number of private schools in SASS to the number of private schools in the sampling frame year of the PSS (2005–06), the same way that comparisons are made between SASS public schools and the sampling frame year of the CCD. By construction, the total number of private schools in the 2007–08 SASS matches the total number of schools in 2007–08 PSS. However, there is sampling variability in the number of private schools for subsets of SASS, such as private schools by affiliation stratum and NCES typology.

The comparisons in table 72 show that the number of private schools measured by SASS in 2007–08 is lower than the comparable number of private schools from PSS in 2005–06. However, the number of private schools measured in the 2007–08 SASS has been adjusted to match the number of private schools in the 2007–08 PSS, and the number of private schools in the PSS did decrease from 2005–06 to 2007–08.

The stratification groups for the 2007–08 SASS (termed affiliation stratum in these tables) are somewhat different from what had been used for previous SASS data collections. Prior to the 2003–04 SASS, there were 20 groups, including an “all else” category, based on a combination of religious affiliation and school membership associations. In the 2003–04 SASS, the number of groups was reduced to 17, which was further streamlined to 11 categories in the 2007–08 SASS. The new stratification groups for both the 2003–04 and 2007–08 SASS do not use a combination of the religious affiliation and association membership responses for forming any of the categories; rather, only the religious orientation (religious or nonsectarian) and religious affiliation items are used. For the 2007–08 SASS only private schools with a national membership size of 800 or more schools have their own stratum group. Previously, groups below that threshold had been sampled at a higher rate than larger groups and tended to respond at lower rates than the larger groups. Now, fewer of these smaller groups’ schools are burdened with responding, but the tradeoff is a lack of detail collected in SASS about those types of schools. Schools from smaller membership groups are still included in the sample, but are included in the “other religious” affiliation stratum.

**Table 72. Estimated number of private schools in 2007–08 SASS compared to 2005–06 and 2007–08 PSS, by affiliation stratum, NCES typology, and region: 2005–06 and 2007–08**

Affiliation stratum, NCES typology, and region (1)	2005–06 PSS traditional private schools <sup>1</sup> (2)	2007–08 PSS traditional private schools <sup>2</sup> (3)	2007–08 SASS private schools <sup>3</sup> (4)	SASS estimate as a percentage of 2005–06 PSS <sup>4</sup> (5)	SASS estimate as a percentage of 2007–08 PSS <sup>5</sup> (6)
Total	28,996	28,218	28,218	97.3	100.0
Affiliation stratum					
Catholic—parochial	3,669	3,363	3,363	91.7	100.0
Catholic—diocesan	2,972	3,064	3,064	103.1	100.0
Catholic—private	993	973	973	98.0	100.0
Baptist	2,511	2,053	2,053	81.8	100.0
Jewish	853	908	908	106.4	100.0
Lutheran	1,632	1,626	1,626	99.6	100.0
Seventh-day Adventist	883	850	850	96.3	100.0
All other religious	8,566	8,517	8,517	99.4	100.0
Nonsectarian—regular	2,770	2,879	2,879	103.9	100.0
Nonsectarian—special emphasis	2,626	2,457	2,457	93.6	100.0
Nonsectarian—special education	1,521	1,527	1,527	100.4	100.0
NCES typology					
Catholic	7,634	7,400	7,400	96.9	100.0
Other religious	14,445	13,955	13,955	96.6	100.0
Nonsectarian	6,916	6,863	6,863	99.2	100.0
Region					
Northeast	6,548	6,531	6,671	101.9	102.1
Midwest	7,200	7,070	7,090	98.5	100.3
South	9,224	8,902	8,970	97.2	100.8
West	6,024	5,716	5,487	91.1	96.0

<sup>1</sup> Private School Survey (PSS), “Final File” (Only Traditional Schools), 2005–06 (Final School Weight).<sup>2</sup> Private School Survey (PSS), “Final File” (Only Traditional Schools), 2007–08 (Final School Weight).<sup>3</sup> Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08 (Final School Weight).<sup>4</sup> Calculated by dividing column 4 by column 2.<sup>5</sup> Calculated by dividing column 4 by column 3.

NOTE: PSS refers to the Private School Universe Survey. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), “Final File,” 2005–06; Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08; Private School Universe Survey (PSS), “Final File,” 2007–08.

## Private School Student Comparison (Private School Data File)

Comparisons were made of the number of private school students in SASS to the number of private school students in the frame year (2005–06) as well as to the concurrent year of PSS. Overall, the SASS student count is about 2 percent higher than the PSS count in 2005–06 and about 3.4 percent higher than the concurrent year’s student count in PSS (table 73). By affiliation stratum, SASS estimates as a percentage of the 2007–08 PSS ranged from 89.8 percent for the nonsectarian special education stratum to 109.4 for the nonsectarian regular school stratum. Among the religious groups, the SASS estimates as a percentage of the 2007–08 PSS ranged from 87.1 percent for the Jewish school stratum to 118.9 percent for the Baptist school stratum. However, by NCES typology, the SASS count of private school students

was higher for all three typology categories when compared to the 2007–08 PSS, by about 3 percent for Catholic and nonsectarian schools to 3.5 percent for other religious schools.

The percentage differences between SASS and the concurrent PSS are larger than the differences between SASS and the frame year PSS. While the differences are larger in absolute terms, sampling variability for some of the smaller strata may account for percentage differences greater than 5 percent.

**Table 73. Estimated number of private school students in 2007–08 SASS compared to 2005–06 and 2007–08 PSS, by affiliation stratum, NCES typology, and region: 2005–06 and 2007–08**

Affiliation stratum, NCES typology, and region (1)	2005–06 PSS private students in traditional schools <sup>1</sup> (2)	2007–08 PSS private students in traditional schools <sup>2</sup> (3)	2007–08 SASS private students <sup>3</sup> (4)	SASS estimate as a percentage of 2005–06 PSS <sup>4</sup> (5)	SASS estimate as a percentage of 2007–08 PSS <sup>5</sup> (6)
Total	5,057,520	4,996,981	5,165,310	102.1	103.4
<b>Affiliation stratum</b>					
Catholic—parochial	982,380	872,690	868,141	88.4	99.5
Catholic—diocesan	895,840	904,516	925,325	103.3	102.3
Catholic—private	368,020	376,688	431,017	117.1	114.4
Baptist	278,921	274,767	326,768	117.2	118.9
Jewish	204,847	235,656	205,358	100.2	87.1
Lutheran	198,604	187,227	178,957	90.1	95.6
Seventh-day Adventist	55,488	53,885	62,154	112.0	115.3
All other religious	1,146,756	1,157,620	1,202,752	104.9	103.9
Nonsectarian—regular	604,383	632,346	691,735	114.5	109.4
Nonsectarian—special emphasis	218,123	195,222	177,564	81.4	91.0
Nonsectarian—special education	104,158	106,365	95,540	91.7	89.8
<b>NCES typology</b>					
Catholic	2,246,240	2,153,895	2,224,482	99.0	103.3
Other religious	1,884,616	1,909,154	1,975,989	104.8	103.5
Nonsectarian	926,664	933,933	964,839	104.1	103.3
<b>Region</b>					
Northeast	1,202,783	1,202,483	1,195,324	99.4	99.4
Midwest	1,233,266	1,175,805	1,234,857	100.1	105.0
South	1,626,304	1,652,555	1,735,764	106.7	105.0
West	995,167	966,138	999,364	100.4	103.4

<sup>1</sup> Private School Survey (PSS), “Final File” (Only Traditional Schools), 2005–06 (Total Student Count, Final School Weight).

<sup>2</sup> Private School Survey (PSS), “Final File” (Only Traditional Schools), 2007–08 (Total Student Count, Final School Weight).

<sup>3</sup> Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08 (Total Student Count, Final School Weight).

<sup>4</sup> Calculated by dividing column 4 by column 2.

<sup>5</sup> Calculated by dividing column 4 by column 3.

NOTE: PSS refers to the Private School Universe Survey. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), “Final File,” 2005–06; Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08; Private School Universe Survey (PSS), “Final File,” 2007–08.

### **Public School Teacher FTE Comparison (Public School Teacher and BIE School Teacher Data Files)**

The comparison between the number of teachers in the SASS Public School Data File and the CCD State Nonfiscal Survey is an approximation, since the public school teacher data are collected and reported in head counts of people rather than in the number of full-time-equivalent positions (FTEs) (table 74). As an external check, this spots gross differences. There are several reasons why the number of teachers, approximated to FTE counts from the Public School Teacher Data File, would differ from CCD State Nonfiscal Survey counts. CCD counts are statewide official tallies of teaching positions, reported from a central agency, and unduplicated to account for teachers in multiple districts or schools. The teacher count from SASS depends in part on the cooperation of the schools to provide a list of all teachers.

Approximately 14 percent of schools in the 2007–08 SASS did not provide a teacher list. The CCD count reflects some teaching positions for which the teacher is away from the school during the SASS data collection, such as a teacher who is on maternity leave. The assumptions about the proportions of part-time to full-time teachers, which are used to adjust the headcount data to FTEs, may be reasonable overall but may not be as accurate on a state-by-state basis. When a public school in sample for SASS is declared out-of-scope, such as when that school merged with another sampled school, the teachers that would have been or actually were sampled are also declared out-of-scope. While such factors affect relatively small proportions of the sampled cases, there may be a cumulative effect on the overall count of teachers in some states.

The SASS teacher estimate of the number of FTE teachers (table 74) was 4.6 percent higher overall than the frame year CCD count of FTE teachers. There could be several reasons for this. One reason is that the approximation of FTE teachers from SASS is not as accurate as the reporting of FTE positions in CCD. Another possible reason is that the school collapsing operation in SASS may not have completely taken care of the overreporting of teachers in combined K–12 schools.

**Table 74. Estimated number and percentage of full-time-equivalent (FTE) teachers in public and BIE-funded schools in 2007–08 SASS compared to the 2005–06 CCD, by state and region: 2005–06 and 2007–08**

Characteristic (1)	2005–06 CCD FTE public school teachers <sup>1</sup> (2)	2007–08 SASS FTE public school teachers (teacher file) <sup>2</sup> (3)	2007–08 SASS public school teachers (head count) (school file) <sup>3</sup> (4)	2007–08 SASS public school teachers (approx. FTE) (school file) <sup>4</sup> (5)	SASS school file as a percentage of 2005–06 CCD <sup>5</sup> (6)	SASS teacher file as a percentage of SASS school file <sup>6</sup> (7)
Total	3,141,966	3,268,905	3,404,704	3,288,038	104.6	99.4
<b>State</b>						
Alabama	51,725	51,479	53,204	52,147	100.8	98.7
Alaska	7,985	7,678	8,154	7,778	97.4	98.7
Arizona	61,560	64,340	66,318	63,991	103.9	100.5
Arkansas	33,819	34,548	35,902	34,769	102.8	99.4
California	305,782	300,033	310,189	298,873	97.7	100.4
Colorado	45,588	47,279	50,172	47,793	104.8	98.9
Connecticut	38,567	47,359	50,039	48,046	124.6	98.6
Delaware	8,785	8,186	8,287	8,140	92.7	100.6
District of Columbia	6,085	4,182	4,906	4,723	77.6	88.5
Florida	166,444	172,972	173,894	171,131	102.8	101.1
Georgia	114,641	117,118	120,885	117,767	102.7	99.4
Hawaii	11,175	12,449	12,853	12,381	110.8	100.5
Idaho	14,916	15,387	15,944	15,159	101.6	101.5
Illinois	131,505	138,350	144,898	139,056	105.7	99.5
Indiana	59,996	66,021	68,323	66,082	110.1	99.9
Iowa	35,489	38,014	39,635	38,015	107.1	100.0
Kansas	33,793	35,255	37,788	35,661	105.5	98.9
Kentucky	42,552	42,375	44,302	43,249	101.6	98.0
Louisiana	48,405	47,181	48,138	47,131	97.4	100.1
Maine	16,385	16,621	17,865	16,942	103.4	98.1
Maryland	56,145	56,581	60,288	58,083	103.5	97.4
Massachusetts	72,775	76,176	80,599	76,186	104.7	100.0
Michigan	96,229	92,875	96,175	90,596	94.1	102.5
Minnesota	52,764	59,028	63,894	59,413	112.6	99.4
Mississippi	31,090	34,796	35,619	35,053	112.7	99.3
Missouri	64,993	70,492	73,207	70,931	109.1	99.4
Montana	10,371	11,810	12,840	12,027	116.0	98.2
Nebraska	21,206	21,519	23,384	21,810	102.8	98.7
Nevada	21,262	23,106	23,544	23,070	108.5	100.2
New Hampshire	15,727	16,492	17,439	16,570	105.4	99.5
New Jersey	109,427	115,676	124,453	120,456	110.1	96.0
New Mexico	21,744	22,099	21,746	21,221	97.6	104.1
New York	208,423	221,724	228,223	221,185	106.1	100.2
North Carolina	96,655	92,507	96,696	94,072	97.3	98.3
North Dakota	7,835	8,150	8,996	8,262	105.4	98.6

See notes at end of table.

**Table 74. Estimated number and percentage of full-time-equivalent (FTE) teachers in public and BIE-funded schools in 2007–08 SASS compared to the 2005–06 CCD, by state and region: 2005–06 and 2007–08—Continued**

Characteristic (1)	2005–06 CCD FTE public school teachers <sup>1</sup> (2)	2007–08 SASS FTE public school teachers (teacher file) <sup>2</sup> (3)	2007–08 SASS public school teachers (head count) <sup>3</sup> (school file) <sup>4</sup> (4)	2007–08 SASS public school teachers (approx. FTE) (school file) <sup>4</sup> (5)	SASS school file as a percentage of 2005–06 CCD <sup>5</sup> (6)	SASS teacher file as a percentage of SASS school file <sup>6</sup> (7)
State—Continued						
Ohio	114,904	130,582	134,258	129,935	113.1	100.5
Oklahoma	41,446	44,543	46,834	45,483	109.7	97.9
Oregon	27,241	30,227	31,606	29,518	108.4	102.4
Pennsylvania	119,405	129,151	136,831	132,208	110.7	97.7
Rhode Island	13,573	12,437	13,126	12,481	92.0	99.6
South Carolina	48,320	47,650	48,938	47,736	98.8	99.8
South Dakota	9,050	10,030	10,365	9,792	108.2	102.4
Tennessee	58,110	64,984	67,104	64,970	111.8	100.0
Texas	316,085	333,586	343,395	339,622	107.4	98.2
Utah	27,338	25,571	27,379	25,298	92.5	101.1
Vermont	9,344	9,323	10,237	9,505	101.7	98.1
Virginia	94,863	90,270	94,045	90,828	95.7	99.4
Washington	53,488	54,576	58,603	54,920	102.7	99.4
West Virginia	19,914	22,257	22,894	22,216	111.6	100.2
Wisconsin	60,421	66,392	72,334	68,247	113.0	97.3
Wyoming	6,621	7,469	7,954	7,508	113.4	99.5
Region						
Northeast	603,626	644,959	678,813	653,580	108.3	98.7
Midwest	688,185	736,706	773,259	737,800	107.2	99.9
South	1,235,084	1,265,216	1,305,330	1,277,120	103.4	99.1
West	615,071	622,024	647,303	619,538	100.7	100.4
Community type						
City	913,042	852,130	869,607	843,709	92.4	101.0
Suburban	1,073,626	1,147,935	1,162,556	1,120,711	104.4	102.4
Town	406,088	450,614	467,384	451,906	111.3	99.7
Rural	749,206	818,227	905,157	871,713	116.4	93.9
BIE teachers only	4,030	4,250	4,356	4,308	106.9	98.7

<sup>1</sup> Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdsch05\_combined.sas7bdat, Full-time Equivalency Count.<sup>2</sup> Schools and Staffing Survey (SASS), “Public School Teacher and BIE School Teacher Data Files,” 2007–08 (Full-time-equivalent Count, Final Teacher Weight).<sup>3</sup> Schools and Staffing Survey (SASS), “Public School and BIE School Data Files,” 2007–08 (Total Teacher Count, Final School Weight).<sup>4</sup> Sum of full-time teachers and half of the part-time teachers reported in the 2007–08 SASS Public School and BIE School Data Files (Final School Weight).<sup>5</sup> Calculated by dividing column 5 by column 2.<sup>6</sup> Calculated by dividing column 3 by column 5.

NOTE: CCD refers to the Common Core of Data. BIE refers to the Bureau of Indian Education. Detail may not sum to totals because of rounding. Total does not include BIE teachers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Preliminary File,” 2005–06, ccdsch05\_combined.sas7bdat; Schools and Staffing Survey (SASS), “Final Public School Frame, Public School, and BIE School Data Files,” 2007–08.

### Private FTE Teacher Comparison (Private School Teacher Data File)

In 2007–08, the number of teachers collected on the SASS Private School Teacher Data File was collected in part-time and full-time headcounts that were converted to full-time-equivalent (FTE) counts. PSS always reports FTE counts of teachers. For ease of comparison, the headcounts of teachers in SASS were converted to approximate FTE counts. The number of private FTE teachers in SASS (table 75) is 0.4 percent higher overall than the frame year count of teachers in PSS and 1.2 percent lower overall than the concurrent year's count. However, both the frame year and concurrent year's PSS teacher counts are quite close in absolute numbers. There are much larger differences by affiliation strata, ranging from about 18 percent below the concurrent PSS count for Jewish private school teachers to about 11 percent above the PSS count for teachers in Seventh-Day Adventist schools. The small sample size of both of these groups (and consequently, relatively larger variance estimates) probably contributes to the large percentage differences in FTE teacher counts. While the overall number of private schools in SASS is controlled to the concurrent PSS total, this is not true of the number of FTE teachers.

There are several factors that contribute to differences between SASS estimates and PSS estimates. Schools that closed between the sampling year of 2005–06 and the data collection year of 2007–08 would tend to lower the FTE estimate in SASS relative to the 2007–08 PSS, at least to the extent that there are differences in the number of FTE teachers between schools that closed and schools that remained open. Similarly, growth in the number of schools would be reflected in the current PSS and to a lesser extent in SASS; both used the same frame, but the 2007–08 SASS used the 2005–06 PSS area frame instead of the 2007–08 PSS area frame. The difference in area frames could either raise or lower the FTE estimates of teachers in SASS. A higher estimate of FTE teachers in SASS by NCES typology could result from one or more factors. The overall count of private schools in SASS is controlled to the 2007–08 PSS, but not within each type of private school, so that the number of schools by NCES typology category may be higher in SASS than in PSS. In addition, differences in the area frames between SASS and PSS may contribute to this effect.

**Table 75. Estimated number and percentage of full-time-equivalent (FTE) private school teachers in 2007–08 SASS compared to 2005–06 and 2007–08 PSS, by affiliation stratum, NCES typology, and region: 2005–06 and 2007–08**

Affiliation stratum, NCES typology, and region (1)	2005–06 PSS FTE	2007–08 PSS FTE	2007–08 SASS private school teachers	2007–08 SASS private school teachers	2007–08 SASS private full-time teachers	2007–08 SASS private part-time teachers	SASS school file (approx. FTE) as a percent- age of 2005–06 PSS <sup>7</sup>	SASS school file (approx. FTE) as a percent- age of 2007–08 PSS <sup>8</sup>
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total	435,235	442,189	489,545	436,912	381,569	107,977	100.4	98.8
Affiliation stratum								
Catholic—parochial	61,311	56,204	60,522	55,142	48,400	12,122	89.9	98.1
Catholic—diocesan	57,959	60,515	65,753	60,611	54,841	10,913	104.6	100.2
Catholic—private	30,085	29,513	34,192	32,012	29,633	4,560	106.4	108.5
Baptist	25,574	24,810	29,816	26,204	23,017	6,799	102.5	105.6
Jewish	23,846	26,492	27,525	21,830	14,679	12,846	91.5	82.4
Lutheran	14,783	14,499	15,657	13,644	11,804	3,853	92.3	94.1
Seventh-day Adventist	4,390	4,392	5,544	4,870	4,354	1,190	110.9	110.9
All other religious	106,108	109,682	122,259	107,386	93,163	29,096	101.2	97.9
Nonsectarian—regular	67,078	73,329	84,457	76,737	68,398	16,059	114.4	104.6
Nonsectarian—special emphasis	26,009	23,656	25,880	21,433	17,165	8,715	82.4	90.6
Nonsectarian—special education	18,092	19,097	17,940	17,043	16,114	1,826	94.2	89.2
NCES typology								
Catholic	149,355	146,232	160,467	147,764	132,873	27,594	98.9	101.0
Other religious	174,701	179,876	200,802	173,934	147,018	53,783	99.6	96.7
Nonsectarian	111,179	116,082	128,277	115,213	101,677	26,600	103.6	99.3
Region								
Northeast	112,545	115,243	122,799	108,456	93,926	28,873	96.4	94.1
Midwest	94,387	91,732	107,557	95,212	82,221	25,337	100.9	103.8
South	149,147	155,592	169,482	154,201	138,446	31,036	103.4	99.1
West	79,156	79,623	89,707	79,043	66,976	22,731	99.9	99.3

<sup>1</sup> Private School Survey (PSS), “Final File” (Only Traditional Schools), 2005–06 (Full-time-equivalency Count, Final School Weight).

<sup>2</sup> Private School Survey (PSS), “Final File” (Only Traditional Schools), 2007–08 (Full-time-equivalency Count, Final School Weight).

<sup>3</sup> Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08 (Total Teacher Count, Final School Weight).

<sup>4</sup> Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08 (Approximate Full-time-equivalency Count, Final School Weight).

<sup>5</sup> Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08 (Full-time Teacher Count, Final School Weight).

<sup>6</sup> Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08 (Part-time Teacher Count, Final School Weight).

<sup>7</sup> Calculated by dividing column 5 by column 2.

<sup>8</sup> Calculated by dividing column 5 by column 3.

NOTE: PSS refers to the Private School Universe Survey. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), “Final File,” 2005–06; Schools and Staffing Survey (SASS), “Private School Data File,” 2007–08; Private School Universe Survey (PSS), “Final File,” 2007–08.

## Non-Charter Public School Library Media Center Comparison (Public School Library Media Center and BIE School Library Media Center Data Files)

There are no external frame comparisons that can be made for the school library counts, since no such comparable data are collected in CCD. Rather, the only comparisons that can be made are the changes between the previous school library counts and the current count. Without any external data for verification, it can be difficult to tell how much of the difference between the two counts is due to sampling variability or nonresponse rate change and how much to substantive change (i.e., a change in the number of schools with library media centers).

Although public charter schools were included in 1999–2000, 2003–04, and 2007–08 SASS, the way that charter schools were sampled and the way that the data were collected for library media centers differed enough so that public charter schools were excluded from the comparison. The counts presented in this section are almost entirely from the Public School Library Media Center Data File. The last column does use the count of schools both with and without school library media centers from the Public School Data File.

Changes in the number of non-charter public schools that lack a library media center are much larger in percentage terms than the change in the number of non-charter public schools with a school library media center (table 76) and are not shown because those data on schools lacking a library are considered unreliable. While the percentage of non-charter public schools lacking such a center is relatively low, some of the percentage difference in the count of these schools, especially by state, can be quite large. These changes are large enough that it is unlikely that they are entirely due to sampling variability. Given the general historical pattern that the percentage of schools lacking a library media center is declining over time, these data seem to suggest that more recent reporting of schools lacking a library varies too much from one time to another to be considered reliable. The non-interview rate for the School Library Media Center Questionnaire was higher in 2007–08 than in 2003–04 or 1999–2000. There is at least some evidence that the non-interview rate may be related to there not being one staff person in the school with sufficient data to be able to report on the previous year's expenditures and holdings or the current year's staffing.

**Table 76. Estimated number and percentage of public and public charter school library media centers (LMCs) in 2007–08 SASS compared to 2003–04 SASS estimates, by state and region: 2003–04 and 2007–08**

Characteristic (1)	2003–04 SASS public and public charter schools with LMC <sup>1</sup> (2)	2007–08 SASS public and public charter schools with LMC (LMC file) <sup>2</sup> (3)	2007–08 SASS as a percentage of 2003–04 SASS <sup>3</sup> (4)	2007–08 SASS public and public charter schools with and without an LMC (LMC file) <sup>4</sup> (5)	2007–08 SASS public and public charter schools with and without an LMC (school file) <sup>5</sup> (6)
Total	78,257	81,917	104.7	90,930	90,756
<b>State</b>					
Alabama	1,343	1,400	104.2	1,476	1,479
Alaska	390	433	111.0	482	482
Arizona	1,324	1,544	116.6	1,923	1,917
Arkansas	1,039	984	94.7	991	993
California	7,190	7,868	109.4	9,345	9,304
Colorado	1,380	1,502	108.8	1,588	1,598
Connecticut	953	974	102.2	1,053	1,061
Delaware	165	167	101.2	210	211
District of Columbia	125	165	132.0	204	200
Florida	2,644	2,906	109.9	3,328	3,326
Georgia	1,838	2,190	119.2	2,313	2,318
Hawaii	281	267	95.0	295	297
Idaho	568	616	108.5	703	695
Illinois	3,417	3,552	104.0	4,091	4,079
Indiana	1,735	1,813	104.5	1,901	1,894
Iowa	1,304	1,257	96.4	1,297	1,297
Kansas	1,384	1,348	97.4	1,367	1,370
Kentucky	1,291	1,225	94.9	1,358	1,360
Louisiana	1,295	1,225	94.6	1,378	1,380
Maine	649	645	99.4	683	684
Maryland	1,289	1,293	100.3	1,405	1,429
Massachusetts	1,609	1,633	101.5	1,800	1,797
Michigan	2,709	3,249	119.9	3,694	3,689
Minnesota	1,484	1,471	99.1	1,945	1,927
Mississippi	880	931	105.8	1,052	1,052
Missouri	1,849	1,879	101.6	2,012	2,021
Montana	529	547	103.4	583	582
Nebraska	940	872	92.8	901	902
Nevada	480	506	105.4	532	532
New Hampshire	428	413	96.5	447	448
New Jersey	2,027	2,142	105.7	2,454	2,463
New Mexico	684	662	96.8	709	716
New York	4,116	4,359	105.9	4,675	4,628
North Carolina	2,105	2,246	106.7	2,379	2,378
North Dakota	373	356	95.4	371	370

See notes at end of table.

**Table 76. Estimated number and percentage of public and public charter school library media centers (LMCs) in 2007–08 SASS compared to 2003–04 SASS estimates, by state and region: 2003–04 and 2007–08—Continued**

Characteristic (1)	2003–04 SASS public and public charter schools with LMC <sup>1</sup> (2)	2007–08 SASS public and public charter schools with LMC (LMC file) <sup>2</sup> (3)	2007–08 SASS as a percentage of 2003–04 SASS <sup>3</sup> (4)	2003–04 SASS public and public charter schools with and without an LMC (LMC file) <sup>4</sup> (5)	2007–08 SASS public and public charter schools with and without an LMC (school file) <sup>5</sup> (6)
State—Continued					
Ohio	3,408	3,292	96.6	3,661	3,641
Oklahoma	1,530	1,487	97.2	1,554	1,560
Oregon	1,125	1,102	98.0	1,175	1,189
Pennsylvania	2,786	2,935	105.3	3,268	3,219
Rhode Island	298	297	99.7	315	314
South Carolina	1,045	1,045	100.0	1,094	1,095
South Dakota	404	366	90.6	462	462
Tennessee	1,586	1,609	101.5	1,630	1,626
Texas	6,668	7,344	110.1	8,340	8,289
Utah	724	764	105.5	921	925
Vermont	301	325	108.0	343	342
Virginia	1,905	1,955	102.6	1,992	1,989
Washington	1,844	1,884	102.2	2,137	2,119
West Virginia	601	622	103.5	747	748
Wisconsin	1,909	1,966	103.0	2,023	2,031
Wyoming	304	286	94.1	326	327
Region					
Northeast	13,169	13,725	104.2	15,040	14,956
Midwest	20,916	21,419	102.4	23,723	23,684
South	27,348	28,793	105.3	31,449	31,433
West	16,824	17,980	106.9	20,717	20,682
BIE schools only	154	161	104.5	177	177

<sup>1</sup> Schools and Staffing Survey (SASS), “Public School Library Media Center and BIE School Library Media Center Data Files,” 2003–04 (Final Library Weight).

<sup>2</sup> Schools and Staffing Survey (SASS), “Public School Library Media Center and BIE School Library Media Center Data Files,” 2007–08 (LMC Indicator, Final Library Weight).

<sup>3</sup> Calculated by dividing column 3 by column 2.

<sup>4</sup> Schools and Staffing Survey (SASS), “Public School Library Media Center and BIE School Library Media Center Data Files,” 2003–04 (Final Library Weight).

<sup>5</sup> Schools and Staffing Survey (SASS), “Public School File,” 2007–08 (Final School Weight).

NOTE: BIE refers to the Bureau of Indian Education. Detail may not sum to totals because of rounding. Total does not include BIE schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School Library Media Center and BIE School Library Media Center Data Files,” 2003–04 and 2007–08; “Public School Frame,” 2007–08.

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## Chapter 11. Information on Data Files and Merging Components

The Schools and Staffing Survey (SASS) is composed of nine survey questionnaires: the School District Questionnaire, School Questionnaire, Private School Questionnaire, Public School Questionnaire (With District Items), Principal Questionnaire, Private School Principal Questionnaire, Teacher Questionnaire, Private School Teacher Questionnaire, and School Library Media Center Questionnaire. These nine questionnaires were transformed into 12 data files that separate each type of respondent into three sectors: public, private, and Bureau of Indian Education (BIE)-funded. Private school library media centers were not given a questionnaire to complete, due to budget reasons; therefore, there is no private school library media center data file. A 13<sup>th</sup> data file, the Public Charter School Analysis Data File, will be released at a later date. Table 77 below identifies each data file and the questionnaire data used to build the file.

The Public School Questionnaire (With District Items) was given to BIE schools, public charter schools, traditional public schools that were single-school districts, and state-run schools such as (see chapter 5 for details). All public charter schools were given the Public School Questionnaire (With District Items), because those that are a part of a public school district usually handle certain district-like functions, such as hiring and firing, independently from the district. There are about 10 public charter schools that were sampled as traditional public schools and, consequently, received the School Questionnaire. These schools identified themselves as public charter schools on the School Questionnaire (for more information see the Data Files Produced From the Public School Questionnaire (With District Items) section).

**Table 77. Names of data files and the questionnaires from which the data were drawn: 2007–08**

Data file	Questionnaire source
Public School District	School District Questionnaire, Public School Questionnaire (With District Items)
Public Charter School Analysis	Public School Questionnaire (With District Items)
Public School	School Questionnaire, Public School Questionnaire (With District Items)
Private School	Private School Questionnaire
BIE School	Public School Questionnaire (With District Items)
Public School Principal	Principal Questionnaire
Private School Principal	Private School Principal Questionnaire
BIE School Principal	Principal Questionnaire
Public School Teacher	Teacher Questionnaire
Private School Teacher	Private School Teacher Questionnaire
BIE School Teacher	Teacher Questionnaire
Public School Library Media Center	School Library Media Center Questionnaire
<u>BIE School Library Media Center</u>	<u>School Library Media Center Questionnaire</u>

NOTE: BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 2007–08.

### Availability of Data

SASS data are available as restricted-use and public-use data. The restricted-use data files are available in the form of SAS data files (value labels are included in the format library) and ASCII data files, which can be read into SPSS and Stata with input code available with the data product. An Electronic Codebook

(ECB) for the restricted-use data is also available, which offers a searchable codebook, or data dictionary. The public-use data can be downloaded through an online tool called the Education Data Analysis Tool (EDAT). Both restricted-use and public-use data include confidentiality edits, which add “noise” to the data in order to make the identification of respondents in published data less certain. (See the Confidentiality Edits to the Data section below.)

The 2007–08 SASS data are released in accordance with the provisions of the amended National Education Statistics Act of 1994 (20 U.S.C. 9017), the Privacy Act of 1974, the Computer Security Act of 1987, and the U.S. Patriot Act of 2001. Under the provisions of Section 183 of the Education Sciences Reform Act of 2002, Public Law 107–279 (20 U.S.C. 9873), NCES is responsible for protecting the confidentiality of individual respondents and releases data (CD-ROMs) for statistical purposes only. Record matching or deductive disclosure by any user is prohibited by federal law.

## **Restricted-Use Data Files**

Access to restricted-use data files is limited to individuals associated with organizations that have received a license to use SASS data. Instructions on how to obtain a restricted-use license is discussed in the next section. Data are restricted-use because they contain individually identifiable information, which is confidential and protected by law. While direct identifiers, such as the respondent’s name, are not included on the data files, the restricted-use files do feature more variables that can indirectly identify a respondent or that can be used to link SASS with the Common Core of Data (CCD) or other data files, which could provide the name of the school and lead to the identification of individual respondents.

*How to Obtain Restricted-Use Data Files.* Researchers who can demonstrate a need for more detailed information may request access to the restricted-use datasets for statistical research purposes, provided that they follow computer security requirements and fill out an Affidavit of Nondisclosure.

Researchers requesting access to the restricted-use datasets must obtain a license to use those data by providing the following information:

- the title of the survey(s) to which access is desired;
- a detailed discussion of the statistical research project that necessitates accessing the NCES survey;
- the name of the principal project officer at the institution who will be heading up the research effort and who will enforce the legal provisions of the license agreement;
- the number, name(s), and job title(s) of professional and technical staff, including graduate students, who will be accessing the survey dataset;
- the estimated loan period necessary for accessing the NCES survey dataset; and
- a security plan for using and storing the data.

Applications for restricted-use licenses are only accepted through the Electronic Application System, which is accessible at <http://nces.ed.gov/statprog/instruct.asp>. All of the procedures are detailed in the *Restricted-Use Data Procedures Manual*, available online at <http://nces.ed.gov/statprog/rudman/toc.asp>. After the access request has been reviewed, the requestor will be informed whether a license to use the restricted data has been approved.

Requestors and/or institutions that violate the agreement are subject to a fine of not more than \$250,000 (under the provisions of 18 U.S.C. 3559 and 3571) or imprisonment for not more than 5 years, or both. The confidentiality provisions that NCES must follow by law can be found at <http://nces.ed.gov/statprog>.

## Public-Use Data Files

The National Center for Education Statistics (NCES) uses the term “public-use data” for survey data when the individually identifiable variables and data have been removed, recoded to collapse the number of categories, or perturbed to protect the confidentiality of survey respondents.

The public-use versions of the public and private sector SASS data files will be available through an online tool called the Education Data Analysis Tool (EDAT) in early 2011. The EDAT guides the user through selecting a survey, population, and relevant variables. EDAT permits the user to download data files in a specific statistical package (i.e., SPSS, SAS, SUDAAN, Stata, R, or S-Plus) or a generic file format (i.e., ASCII or CSV), and will create a custom syntax file based on the user’s selections. Any survey results produced with public-use data will match results produced with restricted-use data.

To protect the confidentiality of individual respondents, only select public and private sector data files will be available in public-use form. Procedures for disclosure avoidance will be used in preparing the data files for release. For example, state names or codes may be deleted and individually-identifiable data that could be used to identify specific principals, teachers, or schools may be categorized, recoded, or removed. Disclosure risk analysis will be used to determine the number and size of recoded categories of variables on the public-use data files.

The public and private school and teacher data files will be released through the EDAT. Other public and private sector data files may be released as well. No BIE sector data files will be released in public-use form. Documentation providing details on the variables included and the ability to merge data files will be included in the EDAT.

EDAT can be accessed at no charge on the NCES website: <http://nces.ed.gov/edat/>.

## Understanding the Restricted-Use Data Files

### Confidentiality Edits to the Data

The restricted-use data files, which are also the source for data accessed through EDAT, have been altered according to NCES standards. Known as confidentiality edits, “noise” was added to the data in order to make the identification of respondents in published data less certain. These edits directly alter some data for individual respondents, but preserve the overall distributions and level of detail in all variables included on the data files. There are several ways in which the data can be altered, including blanking and imputing for randomly selected records; blurring (e.g., combining multiple records through some averaging process into a single record); adding random noise; and data swapping or switching (e.g., switching the variable for age from a predetermined pair of individuals). While all 13 restricted-use data files were altered through one or more of these methods, careful attention was given to preserving the overall distributions and detail of the reported data.

### Data Files Produced From the Public School Questionnaire (With District Items)

The Public School Questionnaire (With District Items) was given to Bureau of Indian Education (BIE) schools, public charter schools, traditional public schools that were single-school districts, and state-run schools such as schools for the blind (see chapter 5 for details). Depending upon the school’s type, the respondent’s data from this questionnaire was used to produce four data files: the BIE School Data File, the Public School Data File, the Public School District Data File, and the upcoming Public Charter School Analysis Data File.

**BIE School Data File.** All schools funded by BIE were given the Public School Questionnaire (With District Items). All BIE respondents and all questionnaire items are included on the BIE School Data File. The variable BIEFLAG identifies whether or not a school is BIE-funded. These schools were placed on separate data files that only include BIE-funded school-related components.

There were instances when schools did not fit exclusively into the BIE-funded school category. In these instances, the following priority for determining school sector was applied:

- schools included on the BIE Directory of schools were categorized as BIE-funded schools and included on the BIE data files; and
- schools that were on the BIE Directory of schools but also indicated that they were public charter schools were categorized as BIE-funded schools and included on the BIE data files.

Not all American Indian students are enrolled in BIE schools; instead, the majority of American Indian students are taught in public schools. Consequently, public schools with a high American Indian student enrollment (defined as at least 19.5 percent of the total enrollment) were oversampled for SASS. (See chapter 4 for details.) The variable AIFLAG identifies schools on the Public School data file that have a high American Indian enrollment. Analysts interested in this student population should consider combining the BIE school sector and public school sector data files to capture all American Indian students.

**Public School Data File.** All traditional public and public charter schools that responded to either the Public School Questionnaire (With District Items) or the School Questionnaire are included on the Public School Data File. All questionnaire items present on the School Questionnaire and all comparable items from the Public School Questionnaire (With District Items) are included on the data file. The unique district-level items from the Public School Questionnaire (With District Items) are included on the Public School District Data File. (See appendix U for a comparison of questionnaire items.)

Public charter schools were first included in the 1999–2000 administration of SASS. At that time, the number of public charter schools was small enough that all known to be operational in 1998–99 and still operating in 1999–2000 were surveyed. The number of public charter schools has continued to grow, making it more feasible to sample public charter schools. Consequently, public charter schools were sampled for the 2003–04 and 2007–08 administrations of SASS (see chapter 4 for details). School-level data from public charter school respondents were included in the Public School Data File. The variable CHARFLAG, which identifies whether the public school is a traditional public school or a public charter school, can be used for separately analyzing public charter school data. The variable CHARTYPE can be used to distinguish between public charter schools that are located in a regular school district and those that are not.

Schools identify themselves as being a public charter school on the questionnaire. Subsequently, the school's charter school status as reported on the 2005–06 CCD may not match the school's classification in the 2007–08 SASS. There were 66 cases where discrepancies existed between what was known about the school's public charter school status from CCD or the school screener operation and the school's response on the questionnaire. Because few cases had discrepancies, these schools were examined individually to determine their correct status. U.S. Census Bureau staff checked the schools' websites or telephoned the schools to determine whether they were traditional public or public charter schools. The schools' response to item S0230 (whether or not the school is a public charter school) was corrected on the Public School data file, as necessary, to reflect the result from the research operation.

**Public School District Data File.** All school districts that responded to the School District Questionnaire and all questionnaire items are included on the Public School District Data File. In addition, district-level

data from single-school districts and from public charter schools not governed by a school district that were collected on the Public School Questionnaire (With District Items) are included on the Public School District Data File.

In order to prevent overcounting students and teachers on the Public School District Data File, only district-level data collected from public charter schools that are not associated with a school district are placed on the Public School District Data File. District-level data collected from all public charter schools, regardless of whether or not the public charter school is governed by a school district, are placed on the Public Charter School Analysis Data File.

In contrast to the 2003–04 SASS, all public charter schools received the Public School Questionnaire (With District Items) in the 2007–08 SASS. This includes public charter schools that were associated with a regular school district as defined by CCD. School districts overseeing public charter schools were not sampled and, therefore, did not receive the School District Questionnaire. However, school districts overseeing one or more public charter schools in the SASS sample may have been included in SASS because one or more of their traditional public schools was sampled for SASS.

## **Categories of Variables**

Variables on SASS data files were organized into the following five categories on each record layout: frame, survey, created, weighting, and imputation flag variables. Each of these categories was further separated into subcategories that provide more detail on each variable’s source. The purpose of these categories is to help the user better understand what types of variables are included on the data files and what the sources were for the variables.

Variables were classified as frame variables if they were drawn from or based on the SASS sampling frame, CCD, or Private School Universe Survey (PSS). Frame variables may or may not have been used for sampling. (See chapter 4 for details on sampling variables.) There are two types of frame variables, or subcategories, identifying the source of each frame variable: 2005–06 CCD or PSS, and SASS frame. Selected variables from these sources were included on the data file if they provided potentially valuable information to the user that was not available from the survey itself. Examples of frame variables include the respondent’s control, or identification, number (i.e., CNTLNUMS for schools, CNTLNUMT for teachers, CNTLNUMD for districts, CNTLNUMP for principals, and CNTLNUML for school library media centers) and locale codes (i.e., SLOCP12, SLOCP8, URBANS12, and URBANS8 on the school data files). The frame variables are listed in “Appendix T. Frame and Created Variables.”

Survey variables are the actual variables drawn from the questionnaire responses. Each item on a questionnaire has a small number printed to the left. This series of numbers is the source code. A single letter was added to the beginning of the series to signify which type of respondent (i.e., school district, school, principal, teacher, or school library media center) is associated with a source code. Consequently, the letter “D” was added for district, “S” for school, “A” for principal or administrator, “T” for teacher, and “M” was added for school library media center. For example, on the School District Questionnaire, item 1a has the source code 0260 printed to the left. On the data file, the source code for this item is D0260.

Created variables are based on survey variables, frame variables, other created variables, or a combination of these. These variables are frequently used in NCES publications and have been added to the data files to facilitate data analysis. The code used to create these variables can be found in the Variable Layouts included in the release CD of the restricted-use data files as well as in appendix T.

There are two types of weighting variables on each data file (for more information on weighting and standard errors, see chapter 9). The first is the sampling weight, or final weight for the respondent, and the second includes the 88 replicate weights. The final weight adjusts for nonresponse and oversampling and is used so that estimates represent the population rather than simply the sample. The replicate weights are used as a set to generate standard errors for estimates. On the school data files, the final weight is called SFNLWGT and the replicate weights are SREPWT1 through SREPWT88.

The imputation flags identify whether or not a survey item was imputed for missing data (see chapter 8 for details) or whether a created variable was imputed because of a nonresponding school or school district. In addition, there is one frame variable, SLOCP8, that has a corresponding imputation flag (FL\_SLC) on all public sector data files, except the Public School District Data File. This variable and its flag were pulled directly from the 2005–06 CCD. No other frame variable has a corresponding imputation flag. All survey variables have a corresponding imputation flag that indicates whether a value was imputed and, if so, what method was used. All survey imputation flags begin with “F\_” and are followed by the name of the variable. For example, the imputation flag for T0030 from the teacher files is F\_T0030. Certain created variables were also given imputation flags. These created variables were built with data from either the school district or the school data files and placed on the school, teacher, principal, or school library media center data files. However, if the school district or school failed to respond to SASS, data would not be available to place on other data files. These data were imputed using data from the sampling frame, if available, or through donors. The imputation flag for these created variables indicates whether or not the school or district failed to respond to SASS and, if so, then what type of imputation was used as the source for the data. All created variable imputation flags begin with “FL\_” and are followed by at least the beginning of the name of the created variable. For example, the variable ENRK12UG comes from the school data file and provides the total K–12 and ungraded enrollment in the school. It is placed on each school’s associated principal, teacher, and school library media center data files. If the school did not respond to SASS, data are still present for this variable on the other data files. The variable’s imputation flag is called FL\_ENRK.

## **Nonresponding Units**

As described in chapter 4 on sampling selection, the school is the primary sampling unit. For each sampled school, the principal, selected teachers, the school library media center, and school district, if applicable, were included in SASS. Not all of these types of respondents chose to participate in SASS. Consequently, it is possible to have several teacher records but no corresponding school record, because the school did not complete the School Questionnaire. Similarly, the district could have agreed to participate in SASS but failed to complete the questionnaire, resulting in having completed questionnaires for schools and principals but no corresponding school district data. Table 78 below identifies the number of cases that have a corresponding unit that did not respond. This information is particularly useful for identifying how many cases are missing when merging data files.

**Table 78. Number of missing cases in combined datasets, by nonresponding component and dataset providing unit of analysis: 2007–08**

Unit of analysis	Number of unweighted cases	Nonresponding public component			Library media centers
		School districts	Principals	Schools	
Public school principal	7,459	659	†	274	701
Public school	7,572	553	387	†	700
Public school teacher	38,240	2,887	3,250	2,788	3,464
Public school library media center	7,276	560	518	404	†

Unit of analysis	Number of unweighted cases	Nonresponding private component			Library media centers <sup>1</sup>
		School districts	Principals	Schools	
Private school principal	1,891	†	†	103	†
Private school	1,968	†	180	†	†
Private school teacher	5,999	†	595	505	†

Unit of analysis	Number of unweighted cases s	Nonresponding BIE component			Library media centers
		School districts	Principals	Schools	
BIE school principal	133	†	†	11	21
BIE school	131	†	9	†	21
BIE school teacher	556	†	57	69	81
BIE school library media center	123	†	11	13	†

† Not applicable.

<sup>1</sup> Private schools did not receive the School Library Media Center Questionnaire.

NOTE: Districts are not included as a unit of analysis because there may be multiple schools, principals, teachers, and library media centers sampled within each district. BIE refers to the Bureau of Indian Education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), “Public School District, Public School, Public School Principal, Public School Teacher, Public School Library Media Center, Private School, Private School Principal, Private School Teacher, BIE School Principal, BIE School, BIE School Teacher, and BIE School Library Media Center Data Files,” 2007–08.

## Linking Data Files Within SASS

SASS provides a rich dataset to analyze elementary and secondary education, and, by design, allows an analyst to link information from different surveys, such as adding school information to the teacher records. On the restricted-use data files, any combination of the school, principal, teacher, and school library media center (if applicable) datasets within each SASS school sector (public, private, and BIE) can be merged using the school’s control number (CNTLNUMS). The school control number is present on all of these data files and can be used to link them together.

The public teacher, school, principal, and school library media center datasets may be merged with the Public School District Data File. These datasets can be merged using the district’s control number (CNTLNUMD) which is included on the Public School District Data File as well as the public school, principal, teacher, and library data files.

There are two ways in which files can be merged. The first method of merging is appending, or concatenating, data files. For example, if the user would like to analyze public and private school data, these files can be appended together. Because these files do not need to be “matched,” no control number needs to be specified to append the data files. This type of merging is not discussed in this chapter. Please

see the manual for the statistical program being used to determine how to append data files and for additional information on how to merge data files.

The second method of merging data files is by matching records using the school's or district's control number. An example of this is when the user would like to merge a school's record with the records of its teachers. The school and the teachers are linked through the school's control number. The data user should carefully consider the unit of analysis when conducting analysis on merged files. With a one-to-one merge, such as combining principal and school characteristics, the unit of analysis could either be the principal or school and the weight would be specified accordingly. However, a many-to-one merge could produce overinflated estimates if the unit of analysis is not chosen carefully. For example, a merged file produced from combining school characteristics to teacher records would require that the teacher be the unit of analysis. Because multiple teachers may be interviewed from the same school, estimates of schools, in this example, would contain multiple records from the same school. Only estimates with the teacher as the unit of analysis would be appropriate in this example. Instructions on how to merge files in SAS, SPSS, and Stata are provided below.

## **Sample SAS Syntax for Merging Data Files and Attaching Variable Labels**

### ***Merging Restricted-use Data Files Using the School Control Number (CNTLNUMS)***

When merging any of the school, principal, teacher, or school library media center files together for a given school, the school's control number, CNTLNUMS, is used to merge data files. In the SAS code below, please note that both data files being merged must be sorted by the variable listed in the “by” statement prior to performing the merge. Comments to explain lines of code are contained within “/\* \*/”. Words in italics are meant to be replaced by the file or variable names that the user specifies.

```

proc sort data = dataset1;
  by CNTLNUMS;
  run;
proc sort data = dataset2;
  by CNTLNUMS;
  run;
data newfilename;           /*creates new merged file name*/
merge dataset1 (in=a) dataset2; /* merges the two files and specifies dataset1 as
                                  unit of analysis*/
                                /* keeps all dataset1 records and only matching
                                   dataset2 records*/
by CNTLNUMS;
if a = 1;
run;

```

The (in=a) convention seen in this example is used to identify the unit of analysis. It can be used in a variety of ways in one-to-one and one-to-many merges. For more information on different types of merges and using the (in=a) convention, users should refer to the SAS manual.

## **Merging the Restricted-use Public School District Data File with Other SASS Public Sector Data Files**

To merge the Public School District Data File with other public sector data files, the district's control number (CNTLNUMD) should be used. This variable is included on the Public School District Data File as well as the public school, principal, teacher, and library data files. The sample code provided above is correct, except that the merging variable will be CNTLNUMD.

### **Attaching Value Labels to SAS Data Files With Assigned Formats**

The SAS data files (with assigned formats) on this release CD have assigned value-label formats. These are provided in the SAS program files ending in \_FMT.SAS. These format statements must be run first in order to create a format catalog to use with the formatted SAS datasets (data files ending in \_FMT.SAS7BDAT).

The following statement should be used to run the format statements before reading in the formatted SAS data file:

```
%INCLUDE 'Path\formatfilename_FMT.SAS';
data workfile1;
set sassdatafile;
run;
```

Continuing the example above, if the \_FMT.SAS file for DISTRICT07\_FMT.SAS7BDAT has been placed in the C:\ directory, users would include the following statement:

```
%INCLUDE 'C:\DISTRICT07_FMT.SAS';
data districtworkfile;
set libname.DISTRICT07.SAS7BDAT
run;
```

Because formats are already assigned to the SAS datasets with assigned formats, it is not necessary to call up the labels. It is necessary to run the format statements before using the datasets with assigned formats.

## **Sample SPSS Syntax for Merging Files Within SASS**

NOTE: Both data files being merged must be sorted by the variable listed in the “by” statement prior to performing the merge. In SPSS, value labels are attached automatically during the extraction process. Words in italics are meant to be replaced by the file or variable names that the user specifies.

### **Merging Restricted-use Data Files Using the School Control Number (CNTLNUMS)**

When merging any of the school, principal, teacher, or school library media center files together for a given school, the school's control number, CNTLNUMS, is used to merge data files. The SPSS syntax is provided below.

```
get file = 'dataset1.sav';
sort cases by CNTLNUMS(A);
save outfile = 'dataset1.sav';
get file = 'dataset2.sav';
```

```

sort cases by CNTLNUMS(A);
save outfile = 'dataset2.sav';
match files file = 'dataset1.sav'          * merges the two files and specifies dataset1 as
                                                unit of analysis*
/table 'dataset2'
/by CNTLNUMS;
save outfile = 'mergeddatafile.sav';      *creates new merged filename*

```

### **Merging Restricted-use Public School District Data File with Other SASS Public Sector Data Files**

To merge the Public School District Data File with other public sector data files, the district's control number (CNTLNUMD) should be used. This variable is included on the Public School District Data File as well as the public school, principal, teacher, and library data files. The sample code provided above is correct, except that the merging variable will be CNTLNUMD.

### **Sample Stata Syntax for Merging Files Within SASS**

#### ***Merging Restricted-use Data Files Using the School Control Number (CNTLNUMS)***

When merging any of the school, principal, teacher, or school library media center data files together for a given school, the school's control number, CNTLNUMS, is used to merge data files. The Stata syntax is provided below. Both data files being merged must be sorted by the school control number prior to performing the merge. Words in italics are meant to be replaced by file or variable names that the user specifies.

```

use dataset1
sort CNTLNUMS
save dataset1, replace
use dataset2
sort CNTLNUMS
save dataset2, replace
merge CNTLNUMS using dataset1      /*merges the two files */
drop if _merge==2                  /*specifies dataset1 as unit of analysis*/
save newfilename, replace           /*saves a new file keeping all dataset1 records and only
                                         matching dataset2 records*/

```

When using Stata, a default merge variable is created during the merging of data files. The default name of this variable is *merge*. The variable *merge* identifies the various categories of data in a one-to-one merge and can be used to specify a unit of analysis. For example, if users merge the public school district file (“using” data file) onto the principal file (“master” data file):

<i>_merge==1</i>	observations from principal data file, no public school district data added (occurs with district nonresponse)
<i>_merge==2</i>	observations from only public school district data file (e.g., district responded, but there is no principal from that district)
<i>_merge==3</i>	observations from public school district and principal data files

By dropping the *merge==2* observations, the merged data file will contain only principals, regardless of whether their district responded. No observations will remain when a district responded without a

principal. If more than one merge is to be done, the merge variable needs to be dropped from the sample before doing the next merge using the following code:

```
drop _merge
```

***Merging the Restricted-use Public School District Data File with Other SASS Public Sector Data Files***

To merge the Public School District Data File with other public sector data files, the district's control number (CNTLNUMD) should be used. This variable is included on the Public School District Data File as well as the public school, principal, teacher, and library data files. The sample code provided above is correct, except that the merging variable will be CNTLNUMD.

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## Chapter 12. User Notes and Cautions

The following notes cover data anomalies in survey or created variables, the effect of missing data across files, deleted variables, locale codes that are now based on decennial Census data from 2000, and linking public charter school records to the Public School District Data File. Users may also be interested in examining the crosswalk of variables contained in “Appendix U. Crosswalk Among Items in the 1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, and 2007–08 SASS.” This appendix contains crosswalks for each SASS questionnaire as well as four crosswalks that compare similarities and differences across the 2007–08 SASS questionnaires given to each type of respondent (i.e., district, principal, school, or teacher).

### Data Anomalies in Survey or Created Variables

Consistency edits were not always performed on all variables, which may result in some data anomalies. As one example, a small number of public school teachers reported having a higher number of Individual Education Plan (IEP) or limited-English-proficient (LEP) students (T0065 or T0066) than the total number enrolled in those schools (S0047). As a result, the number of IEP or LEP students was edited to be no higher than the total enrollment in the school. Another example is that a few public school teachers reported a base annual salary below what the school district reported as the minimum teacher salary in that district. In these cases, it was not possible within the time constraints of the processing schedule to go back to the respondents and determine whether there were other circumstances that could account for such anomalies, such as whether the teacher worked for only part of the school year or whether the teacher or district data were reported incorrectly. A third example is that there were some instances of the public school principal reporting an annual salary that exceeded the district’s highest salary for principals.

### Missing Data Can Cause Inconsistencies Across Files

Consistency edits are applied to survey items for each questionnaire, but inconsistencies may exist. For example, on the 2003–04 SASS Private School Teacher Data File, if the school did not respond to the 2003–04 SASS, but one or more teachers did respond, the school’s program type (PGMTYPE), typology (TYPOLOGY), affiliation (AFF\_99), affiliation stratum (STRATA), and religious classification (RELIG) may have inconsistent data. When the school questionnaire is not filled out, assumptions are made about which type of school it is in order to include that information on the principal, teacher, or school library media center data file. It is assumed that data from the sampling frame, which were collected 2 years earlier, are correct. Similar inconsistencies may be found on the 2007–08 SASS data files.

### Variables Deleted Due to Poor Data Quality

On the Public and Private School Principal Data Files, variables A0200–A0205, from items 30a–d, which rate full-time teachers at the principal’s school by teaching ability level, were deleted from the data files due to poor data quality. Substantial inconsistencies were found between the counts of teachers provided in item 30 by principals and the teacher count data provided on the corresponding school’s questionnaire. In addition, many respondents erroneously reported more tenured fair and unsatisfactory teachers than the corresponding total number of teachers for these two categories.

### Locale Codes Based on 2000 Census Geography

The locale codes used in 2007–08 SASS reports are now fully based upon the geographic concepts used in the 2000 Decennial Census and are taken from the 2005–06 Common Core of Data (the sampling

frame for the 2007–08 SASS). The 2007–08 SASS data files include both the metropolitan-based codes (e.g., SLOCP8 and DLOCP8) and the urban-based codes (e.g., SLOCP12 and DLOCP12) based upon the 2000 Census. The metropolitan-based locale codes will not be included on the data files for the next administration of SASS in the 2011–12 school year. There are two major changes in the locale codes used for SASS, which are discussed below. For a more detailed discussion of the change in locale codes, please see [http://nces.ed.gov/ccd/rural\\_locales.asp](http://nces.ed.gov/ccd/rural_locales.asp).

The first major change reflected in the “urban-centric” locale codes is that they are no longer county-based and thus are based on a smaller geographic area. The new codes incorporate data on schools’ physical location as captured by geographic mapping. Geocoding of schools is based upon the schools’ latitude and longitude coordinates rather than less precise physical addresses. The Census Bureau maintains these in a geographic database that is kept up-to-date through the American Community Survey.

The second major change is in the use of a core-based statistical area system. Over time, how metropolitan and nonmetropolitan areas are defined has evolved. The 1990 Decennial Census geographic areas were based upon countywide definitions of metropolitan or nonmetropolitan areas. By the 2000 Census, urban and rural classifications were based on a subcounty level. In 2003, the Office of Management and Budget changed the terminology, replacing “central city” with “principal city” and “Standardized Metropolitan Statistical Area” (SMSA) with “Core-based Statistical Area” (CBSA). However, these newer terms and locale codes could not be used in the 2003–04 SASS because the 2003 geographic classification of schools or school districts had not been completely implemented into the Common Core of Data (CCD) or the Private School Universe Survey (PSS), which serve as the sampling frames for SASS, by the time the 2003–04 SASS sample was determined. The revised definition of metropolitan and nonmetropolitan areas moved away from population size and county boundaries and more towards the proximity of an address to an urbanized area. The new system is thus referred to as “urban-centric locale codes.”

The overall effect of these definitional changes is to give more accuracy in describing the vicinity of schools. There is a new category for small cities, and rural areas that are truly remote can be distinguished from those closer to an urban core. The urban-centric system places a larger number of addresses in town locales and correspondingly fewer in suburban/urban fringe. However, the percent of schools that are in city locales does not change much with the urban-centric locale codes. The same is true for the percent of schools in rural locales.

The previous version of the full set of locale codes used in CCD had eight categories: three for central cities, three for urban fringe related to the three central city groups, and two rural codes. These eight categories could then be collapsed down to three categories: central city, urban fringe/large town, and small town/rural. The collapsed version was used in 2003–04 SASS reports. The revised, urban-centric locale code scheme now has 12 categories: three for principal cities, three for suburban areas related to principal cities, three for towns, and three for rural areas. These 12 categories collapse down to four levels: city, suburb, town, and rural. This is the version that is used in 2007–08 SASS reports and tables.

The previous “metro-centric” locale codes and their definitions are listed below.

1. Large City:  
A central city of a CMSA or MSA, with the city having a population greater than or equal to 250,000.
2. Mid-size City:  
A central city of a CMSA or MSA, with the city having a population less than 250,000.

3. Urban Fringe of a Large City:  
Any territory within a CMSA or MSA of a Large City and defined as urban by the Census Bureau.
4. Urban Fringe of a Mid-size City:  
Any territory within a CMSA or MSA of a Mid-size City and defined as urban by the Census Bureau.
5. Large Town:  
An incorporated place or Census-designated place with a population greater than or equal to 25,000 and located outside a CMSA or MSA.
6. Small Town:  
An incorporated place or Census-designated place with a population less than 25,000 and greater than or equal to 2,500 and located outside a CMSA or MSA.
7. Rural, Outside MSA:  
Any territory designated as rural by the Census Bureau that is outside a CMSA or MSA of Large or Mid-size City.
8. Rural, Inside MSA:  
Any territory designated as rural by the Census Bureau that is within a MSA or MSA of a Large or Mid-size City.

The three-level variable SLOCP\_03 used in the 2003–04 SASS reports was based upon the “metro-centric” locale codes as follows:

Central city = Codes 1–2  
 Urban fringe/Large town = Codes 3–5  
 Rural/Small town = Codes 6–8

The new “urban-centric” locale codes and their definitions are listed below.

11. City, Large:  
Territory inside an urbanized area and inside a principal city with a population of 250,000 or more.
12. City, Midsize:  
Territory inside an urbanized area and inside a principal city with population less than 250,000.
13. City, Small:  
Territory inside an urbanized area and inside a principal city with population less than 100,000.
21. Suburb, Large:  
Territory outside a principal city and inside an urbanized area with population of 250,000 or more.
22. Suburb, Midsize:  
Territory outside a principal city and inside an urbanized area with population less than 250,000 and greater than or equal to 100,000.
23. Suburb, Small:  
Territory outside a principal city and inside an urbanized area with population less than 100,000.
31. Town, Fringe:  
Territory inside an urban cluster than is less than or equal to 10 miles from an urbanized area.
32. Town, Distant:  
Territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area.
33. Town, Remote:  
Territory inside an urban cluster that is more than 35 miles from an urbanized area.

## 41. Rural, Fringe:

Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster.

## 42. Rural, Distant:

Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster.

## 43. Rural, Remote:

Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster.

A crosswalk between the collapsing of the 8-level “metro-centric” locale codes and the corresponding collapsing used for the 12-level “urban-centric” locale codes is:

Corresponding codes	Metro-centric	Urban-centric
City	1, 2	11, 12, 13
Suburb	3, 4	21, 22, 23
Town	5, 6	31, 32, 33
Rural	7, 8	41, 42, 43

This crosswalk shows how the metro-centric locale codes used in the 2003–04 SASS can be defined to correspond to the new urban-centric codes. Note, however, that the previous SLOCP\_03 collapse of the metro-centric locale codes differs in that “large town” (metro-centric code 5) was included in the 2003–04 SASS locale code of “urban fringe/large town” and thus does not correspond perfectly to the “Suburb” code above. Also, small town in the 2003–04 SASS locale codes was reported along with the two rural codes as “Rural/small town.”

## **District Control Numbers and Public Charter Schools**

In SASS there are three types of public schools: traditional public schools, public charter schools governed by a school district, and independent public charter schools (i.e., not governed by a school district). SASS samples traditional public schools within each state and selects the school district record from the Common Core of Data (CCD) that corresponds with those sampled traditional public schools. Public charter schools are also sampled from CCD, but at a national level and, therefore, no corresponding school district, if applicable, was identified and interviewed. However, for most public charter schools under the jurisdiction of a school district, its corresponding school district was in sample because a traditional public school from that district had been sampled. In these instances, the public charter school can be linked to its school district’s record on the Public School District Data File using the district’s control number (CNTLNUMD). Eight public charter schools sampled in SASS did not happen to have their corresponding school district sampled for SASS. For these cases, a district control number was assigned, but no corresponding record exists on the SASS Public School District Data File. The variable CCDIDLEA (NCES local education agency identification number) is present on the school data file for all public school records and will link each public school to its school district record in CCD. However, there are 19 independent charter schools that cannot be linked to CCD using CCDIDLEA. These public charter schools were connected to an organization, other than a public school district, that operated multiple charter schools. If the public charter school is “independent” from the local school district, CCD uses the same identification number for the school district part of CCDIDLEA as for the school unique identifier part of CCDIDLEA.

## References

- Abramson, R., Cole, C., Fondelier, S., Jackson, B., Parmer, R., and Kaufman, S. (1996). *1993–94 Schools and Staffing Survey: Sample Design and Estimation* (NCES 96-089). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- Efron, B. (1982). *The Jackknife, the Bootstrap, and Other Resampling Plans*. Philadelphia: SIAM.
- Kaufman, S. (1992). Balanced Half-sample Replication with Aggregation Units. *1992 Proceedings of the Section on Survey Research Methods* (pp. 440–445). Alexandria, VA: American Statistical Association.
- Kaufman, S. (1993). A Bootstrap Variance Estimator for the Schools and Staffing Survey. *1993 Proceedings of the Section on Survey Research Methods* (pp. 675–680). Alexandria, VA: American Statistical Association.
- Kaufman, S. (1994). Properties of the Schools and Staffing Survey's Bootstrap Variance Estimator. *1994 Proceedings of the Section on Survey Research Methods* (pp. 1116–1121). Alexandria, VA: American Statistical Association.
- Kaufman, S. (1998). A Bootstrap Variance Estimator for Systematic PPS Sampling. *1998 Proceedings of the Section on Survey Research Methods* (pp. 769–774). Alexandria, VA: American Statistical Association.
- Kaufman, S. (2001). A New Model for Estimating the Variance under Systematic Sampling. *2001 Proceedings of the American Statistical Association*. Survey Research Methods Section [CD-ROM]. Alexandria, VA: American Statistical Association.
- Research Triangle Institute. (2008). *SUDAAN Language Manual, Release 10.0*. Research Triangle Park, NC: Research Triangle Institute.
- Sitter, R.R. (1990). *Comparing Three Bootstrap Methods for Survey Data* (Tech. Rep. No. 152). Ottawa, Canada: Carleton University, Laboratory for Research in Statistics and Probability.